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DENVER 2, COLORADO

ANNUAL REPORT

for the year

1954

1876

WALTER E. SCOTT, JR.
Commissioner of Mines

Publication Approved by James A. Noonan, State Controller

BRADFORD-ROBINSON PTG. CO., DENVER

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DEC 14 '55

TABLE OF CONTENTS

Letter of Transmittal 3
Personnel of Bureau 5
Districts of Inspection 6
List of Commissioners 7
Publications 8
Foreword 11
Minerals in 1954 15
Summary of Production 18
County Activity and Production 20
Production by Counties 31
Accidents 40
Summary of Accidents 41
Fatal Accidents 41
Agency Causing Accident 42
Type, Nature and Site of Injury 45
Men Employed 50
Inspections 51
Information Reports 52
List of Mines 53

LETTER OF TRANSMITTAL

June 25th, 1955

Honorable Edwin C. Johnson
Governor of Colorado
State Capitol Building
Denver 2, Colorado

Dear Governor Johnson:

In compliance with the requirements of the law, Chapter 92, Article 32, Section 11 of the Colorado Revised Statutes 1953, I have the honor to transmit herewith the Report of the State Bureau of Mines for the year 1954.

Respectfully submitted,

WALTER E. SCOTT, JR.
Commissioner of Mines

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PERSONNEL OF THE COLORADO BUREAU OF MINES

1954

WALTER E. SCOTT, JR., Commissioner of Mines	Central City
G. A. (BUD) FRANZ, JR., Deputy Commissioner	Denver
WM. HARVEY CHAPMAN, Inspector, District No. 1	Wheatridge
FRED E. THEOBALD, Inspector, District No. 2	Canon City
JOHN W. DOYLE, Inspector, District No. 3	Leadville
ELZIE D. RAY, Inspector, District No. 4	Ouray
KAYE M. B. SULLIVAN, Administrative Secretary (9 months)	Denver
JOSEPHINE M. IPSEN, Statistician (7 months)	Denver
ALICE N. JENKINS, Stenographer (9 months)	Denver

DISTRICTS OF INSPECTION

COLORADO BUREAU OF MINES

On August 1st, 1954, all former orders of temporary transfers from one inspection district to another, by the Commissioner of Mines, were vacated and, in lieu thereof, the following now become the temporary inspection districts, by order of the Commissioner of Mines, and will so remain until further temporary changes are made by the Commissioner of Mines or by the Legislature of the State of Colorado.

DISTRICT NO. 1, all of the following counties: Adams, Arapahoe, Boulder, Cheyenne, Clear Creek, Denver, Gilpin, Jefferson, Kit Carson, Larimer, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, and Yuma.

DISTRICT NO. 2, all of the following counties: Baca, Bent, Crowley, Custer, Douglas, Elbert, El Paso, Fremont, Huerfano, Kiowa, Las Animas, Lincoln, Otero, Park, Prowers, Pueblo and Teller.

DISTRICT NO. 3, all of the following counties: Alamosa, Chaffee, Conejos, Costilla, Eagle, Garfield, Grand, Jackson, Lake, Mineral, Moffat, Pitkin, Rio Blanco, Rio Grande, Routt, Summit, and that part of Gunnison County in the extreme northwest corner and lying north of the 39th degree of latitude, and that part of Saguache County lying south and east of the Continental Divide.

DISTRICT NO. 4, all of the following counties: Archuleta, Delta, Dolores, Hinsdale, La Plata, Mesa, Montezuma, Montrose, Ouray, San Juan, San Miguel and Gunnison County, except the extreme northwest corner lying north of the 39th degree of latitude and that part of Saguache County lying north and west of the Continental Divide.

By order of
WALTER E. SCOTT, JR.
Commissioner of Mines

COMMISSIONERS OF MINES

HARRY A. LEE	May 11, 1895—May 10, 1903
E. L. WHITE	May 10, 1903—May 10, 1907
T. J. DALZELL	May 10, 1907—May 10, 1911
T. R. HENAHEN	May 10, 1911—May 10, 1915
FRED CARROLL	May 10, 1915—May 10, 1919
HORACE F. LUNT	June 1, 1919—June 1, 1923
JOHN T. JOYCE	June 1, 1923—June 12, 1939
EDWARD P. ARTHUR	June 12, 1939—August 26, 1943
FRED JONES	September 27, 1943—April 25, 1950
WALTER E. SCOTT, JR.	May 3, 1950

PUBLICATIONS OF THE BUREAU OF MINES

BULLETINS

Bulletin No. 1, Recommendations for Safety Appliance in Mining, Harry A. Lee, Commissioner of Mines, 1896.

Bulletin No. 2, Precious Metal Production for the Year 1898, Harry A. Lee, Commissioner of Mines, 1899.

Bulletin No. 3, Mining Laws, Relative to Bureau of Mines Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1899.

Bulletin No. 4, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1901.

Bulletin No. 5, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1902.

Bulletin No. 6. Regulations Relative to the Construction, Equipment and Operation of Metalliferous Mines, Mills and Metallurgical Plants, Recommendations and Mineral Production for 1905, E. L. White, Commissioner of Mines, 1906.

Bulletin No. 7, Federal and State Laws Relating to Mining, Fred Carroll, Commissioner of Mines, 1916.

Supplement to Bulletin No. 7, Mining Laws Enacted by the Twenty-first General Assembly, Fred Carroll, Commissioner of Mines, 1917.

Supplement No. 2 to Bulletin No. 7, Amendments to the Mining Laws Enacted by the Twenty-second General Assembly, Horace F. Lunt, Commissioner of Mines, 1919.

Supplement No. 3 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-third General Assembly, Horace F. Lunt, Commissioner of Mines, 1921.

Supplement No. 4 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-fourth General Assembly, Horace F. Lunt, Commissioner of Mines, 1923.

Bulletin No. 8, The Oil Shales of Northwestern Colorado, Horace F. Lunt, Commissioner of Mines, 1919.

Bulletin No. 9, Mine Safety Standards, Horace F. Lunt, Commissioner of Mines, 1920. Out of print, now embraced in Bulletin No. 11.

Bulletin No. 11, Federal and State Laws Relating to Mining, John T. Joyce, Commissioner of Mines, 1931.

Bulletin No. 12, Mining Laws of Colorado, Edward P. Arthur, Commissioner of Mines, 1942.

Bulletin No. 13, Mining Laws of Colorado, Fred Jones, Commissioner of Mines, 1946.

Bulletin No. 14, Mining Laws of Colorado, Fred Jones, Commissioner of Mines, 1949.

Bulletin No. 15, Oil Well Safety Laws, Walter E. Scott, Jr., Commissioner of Mines, 1953.

Circular No. 1, Location of Lode and Placer Mining Claims Walter E. Scott, Jr., Commissioner of Mines, 1953.

Bulletin No. 16, Colorado Mining Laws with Rules and Regulations, Walter E. Scott, Jr., Commissioner of Mines, 1954.

REPORTS

Report of Bureau of Mines, Colorado, from its establishment in May, 1895, to November 30, 1896, Harry A. Lee, Commissioner of Mines, 1896.

Report for the Year 1897, Harry A. Lee, Commissioner of Mines, 1898.

Report for the Year 1898, Harry A. Lee, Commissioner of Mines, 1899.

Biennial Report for the Years 1899-1900, Harry A. Lee, Commissioner of Mines, 1900.

Biennial Report for the Years 1901-1902, Harry A. Lee, Commissioner of Mines, 1903.

Biennial Report for the Years 1903-1904, E. L. White, Commissioner of Mines, 1905.

Biennial Report for the Years 1905-1906, E. L. White, Commissioner of Mines, 1907.

Biennial Report for the Years 1907-1908, T. J. Dalzell, Commissioner of Mines, 1909.

Biennial Report for the Years 1909-1910, T. J. Dalzell, Commissioner of Mines, 1911.

Biennial Report for the Years 1911-1912, T. R. Henahen, Commissioner of Mines, 1913.

Biennial Report for the Years 1913-1914. T. R. Henahen, Commissioner of Mines, 1914.

Biennial Report for the Years 1915-1916, Fred Carroll, Commissioner of Mines, 1916.

Biennial Report for the Years 1917-1918, Fred Carroll, Commissioner of Mines, 1919.

Annual Report for the Year 1919, Horace F. Lunt, Commissioner of Mines, 1920.

Annual Report for the Year 1920, Horace F. Lunt, Commissioner of Mines, 1921.

Annual Report for the Year 1921, Horace F. Lunt, Commissioner of Mines, 1922.

Annual Report for the Year 1922, Horace F. Lunt, Commissioner of Mines, 1923.

Annual Report for the Year 1923, John T. Joyce, Commissioner of Mines, 1924.

Annual Report for the Year 1924, John T. Joyce, Commissioner of Mines, 1925.

Annual Report for the Year 1925 was fully prepared but because of lack of funds was not printed. The manuscript is on file in the office of the State Bureau of Mines.

Annual Report for the Year 1926, John T. Joyce, Commissioner of Mines, 1927.

Annual Report for the Year 1927, John T. Joyce, Commissioner of Mines, 1928.

Annual Report for the Year 1928, John T. Joyce, Commissioner of Mines, 1929.

Annual Report for the Year 1929, John T. Joyce, Commissioner of Mines, 1930.

Annual Report for the Year 1930, John T. Joyce, Commissioner of Mines. 1931.

Annual Report for the Year 1931, John T. Joyce, Commissioner of Mines, 1932.

Annual Report for the Year 1932, John T. Joyce, Commissioner of Mines, 1933.

Annual Report for the Year 1933, John T. Joyce, Commissioner of Mines, 1934.

Annual Report for the Year 1934, John T. Joyce. Commissioner of Mines, 1935.

Annual Report for the Year 1935, John T. Joyce, Commissioner of Mines, 1936.

Owing to lack of funds the 1936 Annual Report of the State Bureau of Mines was not published.

Annual Report for the year 1937, John T. Joyce, Commissioner of Mines, 1938.

Owing to lack of funds the 1938 Annual Report of the State Bureau of Mines was not published.

Annual Report for the Year 1939, Edward P. Arthur, Commissioner of Mines, 1940.

Annual Report for the Year 1941, Edward P. Arthur, Commissioner of Mines. 1942.

Annual Report for the Years 1942 and 1943, Fred Jones, Commissioner of Mines. 1944.

List of Mines for the Year 1944, Fred Jones, Commissioner of Mines, 1945.

List of Mines for the Year 1945, Fred Jones, Commissioner of Mines, 1946.

Annual Report for the Year 1946, Fred Jones, Commissioner of Mines, 1947.

Annual Report for the Year 1947, Fred Jones, Commissioner of Mines, 1948.

Annual Report for 1948 was not published.

Annual Report for the Year 1949, Walter E. Scott, Jr., Commissioner of Mines, 1950.

Annual Report for the Years 1950 and 1951, Walter E. Scott, Jr., Commissioner of Mines, 1952.

Annual Report for the Year 1952, Walter E. Scott, Jr., Commissioner of Mines, 1953.

Annual Report for the Year 1953, Walter E. Scott, Jr., Commissioner of Mines, 1954.

FOREWORD

The Bureau of Mines of the State of Colorado was established by an Act of the Tenth General Assembly and approved March 30, 1895. The Bureau of Mines Law established the office of Commissioner of Mines which had been authorized by the Colorado State Constitution in 1876 (Article 16, Section 1), and charged the Commissioner of Mines, among other things, with the supervision of Metal Mine Inspection and the enforcement of laws relative to health and safety in Metal Mines. Subsequently, this Act was broadened to include ''any ore mill, sampling works, smelter, metallurgical plant, rock quarry, clay pit, and rock excavations, tunnels, or mine workings of whatever kind or character, except coal mines''.

The Thirty-sixth General Assembly in 1947 passed an Act requiring, in addition to the above, that the Commissioner of Mines conduct safety inspection of all oil wells, property and equipment appurtenant immediately and used in connection with producing oil wells and further charged him with the enforcement of laws relating to the health, safety and welfare of any person employed in such wells, or other property.

From time to time, and by various opinions and decisions, the Colorado Bureau of Mines, under the direction of the Commissioner of Mines, has been authorized and empowered to make safety inspections of all underground metal or mineral mines, open pit or other surface mines, rock and mineral quarries, clay pits and mines, earth and rock dams, water canals, highway excavations, highway gravel pits, all rock excavations, rock tunnels or any mine workings of whatever kind or character (except coal mines), ore mills, mineral grinding plants, highway gravel crushing plants, sampling works, smelters, chemical plants producing a chemical from ore or minerals, metallurgical plants, oil and gas wells and all equipment and machinery used in connection with any of the above and all buildings thereon.

The Commissioner of Mines was authorized to make such rules and regulations as may be necessary for carrying out provisions of safety, and he has further been charged with the enforcement of laws relating to the health, life, safety and welfare of all persons employed in any of the above mentioned categories. The Commissioner, upon receipt of reliable information indicating any condition that might be injurious or dangerous to the health or safety of workmen employed in these places, or any time when he deems it necessary, makes inspections or has inspections made by the inspectors of the Bureau of Mines who report to him on any unsafe condition or unsafe practice. Whenever possible, all accidents are inquired into and a record is kept giving complete information concerning accidents. All fatal accidents are promptly inquired into by an inspector and a complete written report, made to the Commissioner of Mines, becomes a part of the records of the Bureau of Mines.

The Bureau of Mines is required to disseminate such information concerning mining and minerals as may be required by the public, and when he has opportunity and means, the Commissioner of Mines is charged with collecting and preserving mineral specimens and accumulating technical and other data relating to mining, metallurgical processes and geology. He is also required to examine, report on and record the geological formation of important mining districts or mining areas.

The Commissioner of Mines has authority to undertake any research project which would be of assistance to those engaged in mining or which in any way would help to develop the mineral resources of Colorado. He is charged with the responsibility of making investigations regarding prospecting, buying, selling, transporting, treating and reducing ores and minerals, and of recording the progress of the mineral industry providing, of course, that he has means therefore to do so.

The Commissioner of Mines may, from time to time, with the consent of the Governor, compile, publish and distribute bulletins on subjects, districts and counties. When considering a county or a district, the report shall give in detail the history of the locality, the geology, the record of mines and mills, the processes of treatment with results, and shall classify and locate mining property and prospects, together with maps of the same, provided, of course, that there are appropriations for such work.

In other words, the functions of the Colorado Bureau of Mines, as provided by law, could be much the same as in other states where all such work is so handled by a State Bureau of Mines.

Soon after its establishment, the Bureau of Mines had four inspectors inspecting approximately thirty counties in which operations of some type were actually being carried on, but only fourteen counties required much time of the inspectors. Today there are still four inspectors and there are operations of some kind or other in every one of the sixty-three counties. The number of men employed in these operations is approximately 13,000.

Over the years the lack of funds has greatly limited the duties of the Commissioner of Mines and, in consequence, the functions of the Colorado Bureau of Mines and many functions of the office have been seriously curtailed or discontinued. For many years, the first and foremost objective of the Colorado Bureau of Mines has been safety inspection. By inspection and investigations, consistent efforts are made to see that safe practices are used to protect the health, life, safety and welfare of all men in the mineral and other industries under the jurisdiction of the Bureau. The health, safety and welfare of the men employed in Colorado's fastest growing and most productive mineral industries, namely, oil and uranium, are under the jurisdiction of the Bureau of Mines. The safety record of the mineral industries of Colorado has greatly improved in the past three years and the frequency rate and severity rate compare favorably with national averages. Records of accidents are received and recorded, and complete statistics concerning accidents are available for those interested.

The Bureau of Mines has in its custody one of the very finest mineral collections in existence. In addition to the specimens from all over the world, one of the most unusual features of this collection is the fact that it contains specimens of ore from all of the great mines of Colorado. While the collection is visited annually by thousands of tourists, it continues to be of much interest and concern to prospectors, miners, engineers, geologists and persons genuinely interested in Colorado's mineral industry. Foreign engineers and geologists have been most enthusiastic about the Colorado collection.

During the year 1954 more than 348 boxes of mineral specimens were sent to schools, school teachers and children who were making collections of minerals for study. Each box contained specimens of the principal metallic and non-metallic ores being produced in the State.

Every effort has been made to fulfill all requests for samples and specimens but the requests are reaching such a large number that it is only a matter of time until some charge will have to be made. Probably soon after January 1955 a nominal sum will be charged for the boxes of specimens sent out, this charge to cover cost of box, packing and postage.

On May 3rd, 1954 Mrs. Lucille F. Madden, widow of the late R. J. Murray, requested the return to her of the Murray Mineral Collection which had been loaned to the Bureau of Mines by Mr. Murray. This collection of 116 items was given to Mrs. Madden's agent and a receipt for it was received by the Bureau of Mines. The cases containing this collection are being filled by other specimens donated to the Bureau.

During the year there was prepared a revision of the Mining Rules and Regulations of the Bureau of Mines. This revision was combined with the 1953 Colorado Revised Statutes pertaining to mining to form Bulletin No. 16 ''Colorado Mining Laws with Rules and Regulations''. Bulletin No. 16, along with Bulletin No. 15 ''Oil Well Safety Laws with Rules and Regulations'' which was published in 1953, gives the Bureau of Mines, for the first time, a complete set of Rules and Regulations governing the safety requirements of the mineral industries which the Bureau inspects.

On August 1st, 1954 temporary changes were made in the four inspection districts of the State. These changes were made to more evenly divide the work load of the inspectors and to enable the Bureau to direct all inspections in a more efficient manner.

During the year some 8000 requests for specific information were received by the office. However, due to limited personnel it was impossible to properly answer all these letters so a form letter was devised which could be sent to answer many of the inquiries received. Such form letter leaves much to be desired and certainly lacks any personal touch but appears to be the best that can be done until the problem of office help is solved.

The office of the Colorado Bureau of Mines has a vast store of information and reference material, including almost complete files of the United States Geological Survey and most bulletins issued by the United States Bureau of Mines. This reference material contains bulletins, monographs, mineral resources of the United States and professional papers. A complete file of geological material published by the Colorado Geological Survey is on file, as is much historical material pertaining to mining in Colorado. In the files of the Bureau of Mines are more than sixteen thousand reports on individual mines in Colorado.

Advice and information is freely given to prospectors and small operators in order to further the State's mineral development but no written reports on mines are made and care is taken not to encroach on the proper field of consulting engineers and geologists.

Much of the work of the Bureau of Mines, including this report, would not be possible if it were not for the generous cooperation of other State departments and Federal agencies. It is impossible for us to thank individually the State and Federal agencies and the persons therein to whom we are indebted, but we are most grateful to all who have been so helpful.

For their excellent work in the field, the district inspectors are to be congratulated. They have at all times worked long hours under trying conditions and have been most cooperative and loyal.

In preparing and compiling this report the Commissioner has been assisted by "Bud" Franz, Deputy Commissioner, Margaret Lawrence and Thelma MacManus of the office staff and their help is most appreciated.

The publication of this report is authorized by Chapter 92, Article 32, Section 11, of the Colorado Revised Statutes, 1953.

Every effort has been made to assure accuracy and completeness of the data used in the report but changes, due to removal and altered mining conditions, are constantly taking place which may cause some omissions or mistakes to appear in the publication. It will be most appreciated if any additions, corrections or errors are brought to the attention of the Colorado Bureau of Mines.

MINERALS IN 1954

Mineral production in Colorado continues to grow and in 1954 the value of minerals produced from the clay pits, the metal mines, the oil wells and quarries gave the State a value of $337,213,451. This is an all-time high and exceeds the year 1953 by $86,952,811. This mineral production has become of much importance to the economy of Colorado and continued high production of petroleum can cause Colorado to become one of the most important of the States. Of course along with this importance will come the danger and responsibility of being the guardian of such an immense storehouse of wealth.

The production figures given in this report are as accurate as we believe possible to get under existing conditions. Production of gold, silver, copper, lead and zinc were furnished by the Metal Statistics Office of the Mineral Industry Division, Region III, of the United States Bureau of Mines. Information on other metals and minerals was also given by the United States Bureau of Mines. Crude oil and gas production figures in barrels and cubic feet were provided by the Colorado Oil and Gas Conservation Commission. The dollar value of this production was calculated by this office. Production figures of some metals and minerals are reported to no other agency. Consequently, part of the production which we show is from the records of the Colorado Bureau of Mines and was obtained directly from mining operators.

The most important, probably, of all the State's minerals is uranium. In the Colorado section of what is called the Colorado Plateau are many of the richest known uranium mines in the United States and probably in the world. Many other states and other countries are rapidly developing large and valuable deposits of uranium and in time some areas possibly will exceed the value of the known Colorado deposits. This, however, is not yet true and at the end of 1954 Colorado probably contained nearly 80% of the known valuable deposits. In addition to this known uranium ore, new strikes are constantly being found in nearly all areas of the State. Some of these new discoveries show much promise but so far insufficient exploration and development have not determined what the commercial value of these discoveries may mean to the future of Colorado. At least two of the new discoveries seem likely to become consistent producers, one in Gunnison County and one on Ralston Creek, in the foothills, just west of Denver.

No actual production is released on uranium as this is restricted by the Atomic Energy Commission. In 1950 we started using a formula from which we thought it possible to determine the importance of uranium to Colorado's economy and since that time have continued using this same formula. While the figures we release can in no way give aid or comfort to an enemy they do indicate the growth of Colorado's uranium industry.

Climax Molybdenum Mine at Climax, Colorado, during the year became the world's second largest underground metal mine with a daily ore production of some 28,000 tons. This greatly increased production makes Colorado the largest producer of molybdenum in the world.

The United States Bureau of Mines operated their oil shale mine and experimental oil recovery plant near Rifle, Colorado. Congress did not seem too favorable towards continuing this experimental work and the future of the project seems somewhat uncertain. Experiments at the oil recovery plant demonstrated that oil and other products could be produced from the shale at costs not too much above those of standard petroleum products. Oil shale reserves in Colorado are said to contain 500 billion or more barrels of oil.

The combined value of gold, silver, copper, lead and zinc is below 1953, although the value of copper produced is higher than 1953 by $925,466 and that of silver by $1,085,774. The dollar value of silver produced is the highest since 1950 and that of copper the highest since 1941. These two increases are mostly the result of the Eagle Mine of the Empire Zinc Division of the New Jersey Zinc Company concentrating their efforts on production from their pyritic ore bodies rather than the zinc-lead ores. Toward the end of 1954 the prices of lead and zinc were slightly higher and this increase in price augurs well for 1955. The value of molybdenum was higher than 1953 as was the production of tungsten and non-metallics.

The production of non-metallics showed increases in cement, clay, fluorspar and building stones. To have our records somewhat in keeping with those of the United States Bureau of Mines, we again added the production of commercial sand and gravel.

The principal producing districts in the State of gold, silver, copper, lead and zinc were:

1. Eagle County
2. San Miguel County
3. Teller County
4. Lake County
5. Dolores County
6. Mineral County

The leading producers of gold, silver, copper, lead and zinc were:

GOLD	Golden Cycle Corporation Cripple Creek, Colorado
SILVER	Empire Zinc Division, The New Jersey Zinc Company Gilman, Colorado
COPPER	Empire Zinc Division, The New Jersey Zinc Company Gilman, Colorado

LEAD	Idarado Mining Company Ouray, Colorado
ZINC	Empire Zinc Division, The New Jersey Zinc Company Gilman, Colorado

The average price of the above metals in 1954 was: Gold, $35.00 per ounce; Silver, $0.9050 per ounce; Copper, $0.297 per pound; Lead, $0.136 per pound; Zinc, $0.111 per pound.

During 1954 nine new oil fields and three gas fields were added to Colorado's ever expanding oil industry, bringing Colorado's oil and gas production to an all-time high record of $122,734,960. Thirteen hundred fifty-eight wells were drilled and of this number 486 were oil producers, seventy-two produced gas and 800 were failures. Thirty-nine oil discoveries and sixteen gas discoveries were made, giving Colorado a success ratio of 8.46. At the end of the year fifteen counties contained 130 oil fields and in at least two more counties oil strikes were reported in the closing days of 1954.

Rangely in Rio Blanco County with a production of 22,780,191 barrels of oil continues to be Colorado's largest oil field. The Adena field in Morgan County with a production of 4,518,918 barrels is second in size and Little Beaver in Washington County with 2,682,573 barrels is third. For the ten year period ending with 1954 Colorado's petroleum production increased from five million to more than forty-six million barrels annually.

For a number of years much publicity was given to a diminishing mineral industry and many reports showing the value of minerals for Colorado gave no statistics on mineral production, except those given on the five principal metals, gold, silver, copper, lead and zinc. Little attention was paid to the growth of nonmetallic metals in Colorado and even the future possibilities of new petroleum production were overlooked. When the annual reports of the Bureau of Mines were published in 1950 and 1951, the value of minerals as then shown was questioned, and many people felt sure that mining was a dying business and, with the price of gold remaining stationary, that the future was dim and without hope.

Today the economic value of minerals to Colorado is most important and the industry is one that ranks not far from the top as the following table will show:

Value to Colorado of Various Industries for 1954, Estimated

Manufacturing	$425,000,000
Minerals, including Coal	359,992,000
Livestock	297,365,000
Tourist	300,350,000
Building Construction	270,300,000
Farm Crops	265,900,000

Estimates on all industries other than mineral are based on various press reports which were noted during 1954. The last available figures on manufacturing and commodity value to the State are for the year 1953, and are considerably lower than the ones shown above. While all business seems to be booming in Colorado, it would appear that the mineral industry is holding its own. As a matter of fact, with the possibilities that seem to exist in new petroleum fields, it may be that in a limited time petroleum and its products will be the most valuable of Colorado's industries.

Coal may stage a comeback when new processes begin developing the many by-products from coal. Colorado with its abundant supply of this material could well take the lead in the production of coal for the manufacture of various coal and coal tar by-products.

The following production table shows the steady growth of Colorado's mineral industry:

Year	Metals	Non-Metallics	Oil & gas	Total
1950	$ 43,619,318	$ 3,930,578	$ 58,382,500	$105,932,396
1951	63,312,690	4,823,869	70,453,050	138,589,609
1952	117,039,055	12,681,789	80,563,705	210,284,549
1953	138,765,509	14,207,866	97,287,265	250,260,640
1954	191,641,170	22,837,321	122,734,960	337,213,451

PRODUCTION OF METALS, NON-METALLICS, PETROLEUM 1954

	Metals
Uranium (Mining and processing with Vanadium by-products—Value to State)	$118,000,000
Molybdenum	45,192,856
Zinc	7,714,500
Tungsten	5,575,495
Lead	4,814,400
Gold	3,325,000
Silver	3,077,172
Copper	2,613,600
Miscellaneous (Metals which can not be separated for production value)	1,090,000
Tin	10,617
Pyrite	132,850
Beryllium	35,400
Iron	54,080
Manganese	5,200
Total	$191,641,170

PRODUCTION OF METALS, NON-METALLICS, PETROLEUM

1954—Continued

	Non-Metallics
Alabaster	$ 7,500
Calcium Phosphate	1,600
Columbium-Tantalum	5,440
Cement	5,277,020
Clays	1,040,352
Dolomite	130,350
Feldspar	266,975
Fluorspar	3,127,000
Gypsum	238,800
Lepidolite	18,000
Limestone	2,296,410
Marble (building)	233,937
Mica	13,583
Peat	49,720
Perlite	43,366
Sand and Gravel	8,288,300
Silica Rock	43,600
Stone, Building	1,589,768
Stone, Crushed	31,500
Stone, Monumental	61,000
Turquoise	8,230
Volcanic Cinders	64,870
Total	$22,837,321

Crude Oil	$115,515,360
Gas, all classes (Well head value)	7,219,600
Total	$122,734,960

Metals	$191,641,170
Non-Metallics	22,837,321
Oil and Gas	122,734,960
TOTAL MINERAL PRODUCTION	$337,213,451

COUNTY ACTIVITY AND PRODUCTION

ADAMS COUNTY

Gold and some silver were again produced in Adams County by sand and gravel producers along Clear Creek. The amount of gold and silver produced this year was considerably less than in 1953. Several new oil discoveries were made in Adams County and its petroleum production continued to increase.

ARCHULETA COUNTY

It was reported that filings were made on a number of mining claims on a branch of the Piedra River which are said to contain uranium values. Grand Junction geologists stated that the ore tested as high as 0.16 U_3O_8. Oil activity by the Oriental Oil Company continued near Chromo.

BENT COUNTY

South of Las Animas a drilling well encountered both gas and oil, causing much excitement as it has long been felt that the Las Animas Arch might prove another major oil structure.

BOULDER COUNTY

The Wolf Tongue Mill operated by the Hetzer Mines Inc. was the largest producer of tungsten in the County. Ore for this mill came from many of the small mines of the area. During the year the Wah Chang Corporation of New York took over the mill and other properties of the Boulder Tungsten Mines, Inc. It is possible that Wah Chang may become an important factor in the production of tungsten in Boulder County and other areas of the State. The General Chemical Division of the Allied Chemical and Dye Corporation maintained their production of fluorspar during the year. The Burlington Mine of this Company has been sunk to greater depths and excellent ore has been encountered, making this property one of the rich underground fluorspar mines of the United States. H. M. Williamson & Son and Ozark-Mahoning Company milled their ores at the Ozark-Mahoning Mill at Jamestown, Colorado.

CHAFFEE COUNTY

Some rumors around Salida early in the year gave hope of a tungsten processing mill and while some known tungsten finds had been not far from Salida nothing matured. Large tonnages of limestone were shipped from the Monarch Quarries of the CF&I to their steel mills at Pueblo. Considerable good grade fluorspar was produced from the mines and quarries of the Reynolds Mining Company at Poncha Springs, but the preferential treatment given to foreign producers finally caught up with them and due to lower competitive prices Reynolds was forced to close down in November. Feldspar mined by the M&S Homestake Mine and processed by the Western Feldspar Milling Company increased over 1953 and shipments of spar were made to glass factories. Some mica and other minerals associated with feldspar were produced in Chaffee County.

CLEAR CREEK COUNTY

Considerable prospecting for uranium was done throughout the year in Clear Creek County and many discoveries were reported. In places the pink feldspars and pegmatites of the area showed some value but processing of the product to recover the value of uranium still will need to be solved. The Jo Reynolds Mine is being reopened by the Reynolds Uranium Corporation of New York. In the early 1900's when pitchblende was being sought for radium, the Jo Reynolds was known to contain pitchblende. The Lambertine Mill burned during the spring and has not been replaced. The loss is said to have amounted to $60,000. The Dixie Mine of LeRoy Giles & Company produced gold ore which was milled in the Company's own mill east of Idaho Springs. This mill along with the mill of the Silver Spruce Gold Mining Company did some custom milling but sufficient ore was not available to keep either mill in steady operation. The East Lake, Mendota-Frostburg, Nabob and Smuggler mines produced small amounts of ore during the year. Beryl ore also was produced in Clear Creek County.

COSTILLA COUNTY

The production of scoria by the Colorado Aggregate Company continues at Mesita. A ready market was found for all the scoria produced as it makes a superior type of building block.

CUSTER COUNTY

The Great Lakes Carbon Corporation continued to be the State's largest producer of perlite from their Greene and Wilfley quarries near Rosita. The perlite is trucked to the company sizing plant at Florence and much of it is shipped to other plants throughout the county for exfoliating. Prospecting was done around many of the old mines of the area and reported finds of both thorium and uranium were made. The Tantalizer Mining Company did some work at the Old Peerless Mine in Brush Creek with the idea of rehabilitating the mine for future operation. The company stated that assays showing tantalum had been taken from the mine.

DELTA COUNTY

The Doty Sulphur Mine some twenty miles east of Delta is operated by the Atlas Mining and Manufacturing Company and produces small amounts of low grade sulphur for fertilizer. Their operation is mostly seasonal. Some unsuccessful wildcat drilling for oil was done in Delta County in 1954. Like many other counties of the State Delta experienced an uranium boom. During the summer of 1954 more than 500 mineral claims were located and filed with the County Clerk and Recorder. The areas in which the claims were located are Black Canyon, Domingues Creek, Mesa Creek, North Fork of the Gunnison River, Red Canyon and Wells Creek. Some claims were leased soon after they were located.

DOLORES COUNTY

The Rico-Argentine Company drove their Main Tunnel under the old Argentine and Blaine workings and will connect the Tunnel with the Argentine Shaft. The Rico-Argentine Company also has under construction a 1½ million dollar sulphuric acid plant. Sulphuric acid will be manufactured from the large deposits of iron pyrite in their Iron Springs mine and it is expected that most of the acid produced will be sold to the uranium processing plants in the Colorado Plateau Area. This is the first sulphuric acid plant to be constructed at a single mine in Colorado. The Minerals Mining and Milling Company took over the Edwards Mill at Rico and will mill ore coming from the property leased from the Union Carbide and Carbon Company. Considerable prospecting for uranium is being carried on in several parts of the County.

DOUGLAS COUNTY

Fire and plastic clays were produced from the Hogback Mine and in the Castle Rock area. Limestone and silica rock were produced north of Littleton. Although clay production in the County was less than in 1953 the value of limestone and silica rock produced was three or four times greater than in the previous year.

EAGLE COUNTY

The Eagle Mine of the Empire Zinc Division of the New Jersey Zinc Company was the largest producer of copper, silver and zinc in the State and accounted for most of the State's increase in those metals. This Company was second in the State for the production of lead. Lead and zinc ores are milled at the Company's 1000-ton underground mill, but most of the pyritic iron ore containing copper, gold and silver is shipped directly to the smelter. Prospectors are reported to have found uranium in remote areas of Eagle County and it is expected that the late spring and summer of 1955 will find many other prospectors in the County and probably some production. Some volcanic cinders were produced near Gypsum for building blocks.

EL PASO COUNTY

Several quarries were active in El Paso County during the year and limestone production, principally from the Lennox Breed Quarry, doubled in the amount produced. The clay production of the County far exceeded that of last year. Commercial sand and gravel produced in El Paso County during 1954 amounted to nearly two million dollars. A number of oil leases was granted in various parts of the County and several wildcat wells were started, but no discoveries were reported during the year.

FREMONT COUNTY

Fremont County still leads the State in the diversity of nonmetallics produced with cement leading the other products. In metals some beryllium was produced and a small amount of tantalum. These metals came as a by-product of the feldspars. Travertine marble for building purposes greatly increased over 1953 and terrazzo marble chips maintained approximately the same value as in previous years. Terrazzo chips are used in the floors of many buildings in the United States and the variety of color gives a most pleasing effect. Many reported uranium strikes were made in Fremont County and from the location of these reported deposits it would seem that uranium was widespread in the County. Areas near Guffey and the Tallahassee area seem most promising. Along the Fremont-Custer County border are claims of both uranium and thorium. The coming summer should be most active in all these regions showing radioactivity. The oil field at Florence in Fremont County is the State's oldest and it is reported that some deep wells are to be drilled in this field.

GARFIELD COUNTY

The production of limestone from the Norberg Quarry at Glenwood Springs was slightly higher than in 1953. The Rifle Plant of the United States Vanadium Company milled company ores along with ores from other mines under the A.E.C. schedules. This plant worked for many months without a lost time accident and is now well on the way of reaching at least a two-year mark without a lost time accident. Operations continued at the Rifle Oil Shale Mine and Experimental Plant of the United States but much publicity has been given to the fact that no further appropriations will be made and that this experimental operation will have to cease operations at the end of the fiscal year. This for many years has been an important industry for Rifle and vicinity and its closing will be a great loss to the business men of the community. The Brown No. 1 Wildcat Well on Douglas Pass came in for more than two million cubic feet of gas from the Morrison Formation.

GILPIN COUNTY

More men are employed and more mining activity is in progress in the ''Little Kingdom of Gilpin'' than for many years past. Most of this activity can be accounted for by the unusual flurry of uranium excitement that has swept the County, although the production of gold, silver, copper, lead and zinc is considerably higher than for several years. Small amounts of tungsten also have been shipped from the County during the past year. The production of peat moss is something new for the County and one deposit north of Black Hawk will be productive for several years and should make a small fortune for the owner. It was from the Central City area that high grade pitchblende was produced many years ago and from this pitchblende was produced the world's first radium. With this background it is only natural that the County should become a mecca for uranium seekers. Many mines are seeking uranium and many new claims have been located with the same object in mind. So far only small amounts of uranium ores have been produced, but by driving into new ground and sinking to deeper horizons the possibilities seem excellent. Perhaps the uranium boom may exceed the glory of the days of Colorado's first Lode

Gold discovery at Gregory Point midway between Black Hawk and Central City.

GRAND COUNTY

Newmont Exploration Company spent considerable time and money exploring uranium finds not far south of Hot Sulphur Springs. Much of this work was on ground set aside for wildlife and Newmont was forced, at least temporarily, to discontinue their exploration activities. Several other uranium strikes were reported in Grand County but in many areas it will be summer before they can be completely checked.

GUNNISON COUNTY

The Lilly Belle Mining and Milling Company near Iola was reported developing a tungsten deposit but no production came from that area. A small amount of tungsten was produced from the Cumberland Pass Area and the area will undergo more development next spring and summer. The production of gold and silver for the year was more than in 1953 and the production of lead about the same. This production came from numerous small operations in the County and should improve during the coming year. The mill at the Keystone Mine was completed and will start operations in 1955. The United States Lithium Company has taken over the Poston holdings in the Brown Derby Mine and will develop the deposits of lepidolite and lithium known to exist there. Thorium deposits have been located near Powderhorn and other parts of the County. The most important new discoveries appear to be uranium and those in southeast Gunnison County will be important. The Los Ochos Mine developed by Thornburg should turn into one of the successful uranium deposits of the State.

HINSDALE COUNTY

With the discontinuance of operations at the Ute and Ulay property of the Idarado Mining Company, activity in the County was limited to prospecting and exploration. Some exploration was done on both the Black Crook and the Hoosier Boy Mines and gold, silver, lead and zinc were produced. Some uranium prospects were reported during the year and claims were staked near Stony Creek five miles from Lake City.

HUERFANO COUNTY

During 1954 a number of uranium discoveries were reported principally in the La Veta Pass area but there still has been no production of any consequence.

JACKSON COUNTY

Fluorspar produced by the Ozark-Mahoning Company at the mine and mill at Cowdrey showed an increase in value over 1953. Much of the concentrate produced is being stored in slit trenches not far from the mill. The Colorado Mining Corporation opened the Lower Tunnel of the Old Farwell Mine near Hahn's Peak and did considerable diamond drilling. Uranium prospects were discovered in various parts of the County but the most persistent activity seemed to be north and east of Steamboat Springs. A good find of manganese ore in the Rabbit Ears Pass District was reported at the Dave Junior Claim. Development work on this manganese prospect will start as early in the spring as the weather will permit.

JEFFERSON COUNTY

The Schwartzwalder on Ralston Creek was active all year, although near the end of the year there were rumors that the property was being sold to some large operating company. There was considerable prospecting and some drilling and sampling for uranium and near the year's end several finds were reported. Gold from the sands of Clear Creek was produced by several commercial sand and gravel companies and most of this gold was processed by Kerkling & Slensker who operated sluices at several plants. Jefferson County continued to be the largest clay producer in Colorado, and near the end of 1954 was giving promise of becoming an oil producing county. Johnson Drilling Company on the Pallaoro ranch not far from Morrison was said to be on oil at the end of the year.

LAKE COUNTY

During 1954 the Resurrection Mill at Leadville operated a section of their mill to handle small amounts of company ore and ore produced by Robert L. Jones as lessee on the Resurrection No. 2 Mine. Custom ores were handled from other mines in Lake County and other counties producing lead and zinc ores. The Garibaldi Tunnel lease operated for three or four months and a few other properties in the Leadville area produced some ore. The Arkansas Valley Plant of the American Smelting and Refining Company worked all year and smelted both domestic ore and concentrates and concentrates from foreign countries. Production of molybdenum by Climax Molybdenum Company was greatly increased and shipments were the highest since 1943. During the year most phases of the underground mine expansion program were completed and the mill capacity was raised to approximately 28,000 tons per day. Climax now is the largest underground mine in North America and second largest of the world's producing underground mines. Various haulage and crushing records which have been established at this mine during 1954 have much to do with the ever growing mineral industry in Colorado.

LA PLATA COUNTY

The Durango Plant of the Vanadium Corporation of America continues to be one of the larger plants in Colorado producing uranium and vanadium concentrates. The Zodomoc Mines, Inc. operating the Bessie G Mine in the La Plata mountains west of Durango continues to make occasional shipments of extremely high grade gold ore with some ore said to carry as much as 347 ozs. of gold per ton of ore. Uranium ore was discovered in the Junction and Lightner Creek areas and some very good roscoelite ore is reported to have been found. The Stanolind Oil Company drilled in more gas wells in the Red Mesa and Ignacio areas.

LARIMER COUNTY

Much excitement was caused during the year by numerous uranium strikes in Larimer County and apparently many of these had been checked by the A.E.C. Small amounts of beryl and feldspar were produced from pegmatites but no recorded production is available. The Cherokee Mine (Copper King) in the Cherokee Park has become a tourist mine and there has been no further mining of pitchblende. The Norberg Limestone Quarry produced limestone mostly for use at sugar plants and the Ideal Cement Company produced limestone and gypsum for use at their Boettcher Cement Plant. The U. S. Gypsum Company produced gypsum from their quarries and processed it at their plant near Loveland.

LAS ANIMAS COUNTY

Clay produced by the New Mary, a former coal mine, is the only mineral production of the County, except coal. Alabaster which is generally credited to the County actually is quarried in Otero County. Some wildcat oil wells have been drilled in Las Animas County and in some areas the geological structures look excellent for finding oil.

LOGAN COUNTY

Many new discoveries of oil and gas were completed during the year and these new discoveries along with old producers placed Logan County first in production in the so-called Denver-Julesberg Basin.

MESA COUNTY

Grand Junction in Mesa County contains the principal western office of the Atomic Energy Commission and from this office are issued many directives controlling activities of the A.E.C. In addition to the A.E.C., many of the prominent mining companies have their local or working offices in Grand Junction and it is here that the large mill of the Climax Uranium Company is located. Mesa County is a large producer of uranium and vanadium ores. Several wildcat oil wells have been drilled and more are to be drilled in the future. Mesa County may soon include oil in its fast growing mineral industry.

MINERAL COUNTY

The Emperius Mining Company at Creede continues to be the County's large producer and this company ranks high in the State in the production of gold, silver, lead and zinc. This Company operates many of the old mines of the district including the Amethyst, Aspen, Commodore, Del Monte, Equinox and others. The

Outlet Mining Company at Creede was a substantial producer during the year and small amounts of ore were produced by other mines in the County.

MOFFAT COUNTY

Numerous finds of uranium bearing materials have been found in many sections of Moffat County and prospecting has been done in the area north of Blue Mountain. It is rumored that one large company is locating a great many claims in Moffat County and expects to test them this coming summer. There are several producing oil fields, among them Powder Wash and Hiawatha, in the County and many wildcats are being drilled in the search for more oil.

MONTROSE COUNTY

Two of the large uranium processing mills are in Montrose County, the Uravan Plant of the United States Vanadium Company at Uravan and the plant of the Vanadium Corporation at Naturita. Both plants have greatly increased tonnage handled during the year. Montrose County contains many of the rich areas which produce uranium and vanadium and several large companies are consistent producers. The Golden Cycle Corporation completed their 635-foot shaft near Uravan and began production early in the year. Since that time they have acquired additional leases in the area. The A.E.C. announced discovery by diamond drill of new rich ore in the Bull Canyon area of Montrose County and they think production from this discovery may be quite large. The Shattuck-Denn Mining Company completed their shaft on Club Mesa and are making good production from there.

OURAY COUNTY

The King Lease of the Camp Bird Mine continued to be a large producer of lead and zinc with production maintaining about the same level as in 1953. All buildings at the portal of the Treasury Tunnel which were destroyed by fire in 1953 were replaced by steel and cement block fireproof buildings which added greatly to the general safety. In the mine workings of the Idarado Mining Company the completion of the raise from the Meldrum Tunnel to the Treasury Tunnel connected the Telluride side of the property to the Ouray side.

PARK COUNTY

It was reported that the Colorado Reduction Corporation had taken over the Old Record Mill in North Mosquito Gulch about five miles from Alma and intended to treat ore from their mines on Mt. Bross, but the continued depressed prices of lead and zinc kept them from starting. Buckskin Joe Mines, Ltd. produced gold-zinc-lead-silver ore from the Phillips Group until mid-July when they stopped mining operations and worked exclusively on developing ore reserves. Several small properties in Park County shipped some ore to the Resurrection Mill at Leadville.

PITKIN COUNTY

There was less mining in Pitkin County than for many years and the production was very small. However, some of the mines were doing exploration and development and getting ready for the time when the price of lead and zinc will increase. Uranium has been found in many of the old Aspen mines but as most occurrences have been in the lime formation there is only a limited market for the ore as the A.E.C. prefers to process as little of this type ore as possible with present milling facilities. A newly formed corporation has purchased the property at Marble and present plans are to make commercial limes and chips for flooring. Probably later the Old Quarry will be started.

PUEBLO COUNTY

Pueblo County produced clays principally from mines in the vicinity of Stone City. The International Mineral and Chemical Corporation has a mica grinding plant in the city of Pueblo but the rough mica comes from counties other than Pueblo. Some uranium strikes were reported in the area between Greenhorn and Beulah but no production was reported from any of the new finds.

RIO BLANCO COUNTY

Rio Blanco County with its Rangely Oil Field was again the State's largest oil producing county. Rangely's production of 25,420,452 barrels amounted to half of the crude oil produced in Colorado. The Wilson Creek Field has more than 4000 acres of productive oil area and most oil is being produced at a depth of approximately 7200 feet. Several uranium discoveries have been made in Rio Blanco County with ore produced and shipped to Rifle and Grand Junction processing plants. A large amount of core drilling has been done in the County by the Atomic Energy Commission.

ROUTT COUNTY

The discovery of gold in 1862 near Hahn's Peak opened northwest Colorado and made possible the development that followed. Now ninety-three years later there appears to be a revival with work starting in Way's Gulch in the hope of causing a new stampede. John Tamm is opening his property and thinks that by the use of modern equipment the low grade deposits of Way's Gulch will be profitable. The Colorado Mining Corporation opened the Number Two Tunnel of the Old Farwell Mine five miles northeast of the town of Hahn's Peak and explored underground by diamond drilling. Work was discontinued when winter weather started and no reports on the underground drilling were given. When in active operation the Farwell Mine produced a good grade of copper ore containing molybdenum. Some uranium finds have been reported in the Columbine-Hahn's Peak area. Exploration was started on the Haskinson Claims north of Steamboat Springs in the Fish Creek Falls area. It is proposed to drive a 350-foot tunnel on these claims so that the area can be extensively explored. There have been other uranium discoveries in Routt County, some of which did not have commercial ore and others which still must be explored.

SAGUACHE COUNTY

Lead and zinc production increased considerably in Saguache County during the year but the production of gold, silver and copper was much lower than in 1953. Most of the lead-zinc production was from the Rawley Mine at Bonanza although a number of other mines in the area added to the total production. Discovery of the productive Los Ochos Mine near the Gunnison-Saguache county line caused much excitement in the so-called Cochetopa area and there is no doubt but that good productive uranium mines will be developed in Saguache County as well as Gunnison County. Much diamond drilling was done on Greenback Mountain near Bonanza by Bear Creek Mining Company, a subsidiary of Kennecott Copper Corporation. No reports were issued on this drilling program.

SAN JUAN COUNTY

The mineral production of San Juan County was the lowest in many years. Since the Shenandoah-Dives Mill closed in March of 1953 there was not a ready market for the milling ores of the small producers. Some development in the underground workings of the Shenandoah-Dives was continued under a Defense Minerals Exploration contract, but no other mining was done. The Pride Mill, one of the most modern in the area and with a capacity of 125 tons, worked for several months but there was not sufficient developed ore to keep it in constant operation. The Lead Carbonate Mines, Inc. worked all year, mostly on development, but all ore produced, except one or two small shipments, was either kept in the stopes or stockpiled waiting for higher lead and zinc prices. During the year there were reported new discoveries of tungsten ore and discoveries of uranium but no commercial production from either source.

SAN MIGUEL COUNTY

Late in the year the Silver Bell Mines Company shut down its mines and mill at Ophir but continued limited development at the Carbonero Mine at Old Ophir a while longer. Finally the company shut entirely down to go into uranium mining until there was an improvement in the prices of non-ferrous metals. The Iron Springs Placer at Old Ophir which has been producing bog iron was sold to C. K. Williams Company of East Saint Louis who increased the production to double of that produced in 1953. The Idarado Mining Company, operating the Black Bear, Ajax and other mines, continued to be one of the large producers of the State. For the ninth successive year the Company increased the tonnage of ore mined and milled. The Telluride Mines, Inc., owning the Smuggler-Union, Montana and other mines, was purchased by Idarado in May 1953, but was completely closed down by the new owner in February 1954 due to depressed lead and zinc prices. Not long after this shutdown a small force of men were re-employed at Telluride to continue underground development and repairs and to repair and increase milling capacity. More than a million dollars was spent on this work and everything is in readiness to start when the lead and zinc prices increase. Under the new flow sheet the Telluride Mill can handle 1400-1500 tons of ore each twenty-four hours. During the summer of 1954 the U.S.G.S. had a four man party under A. L. Bush making a new geologic map of the area, with studies on general structures and deposition of ore bodies. It is expected to take several years to complete the survey. The Georgeto Mine at Slick Rock is one of the State's large uranium producers. Globe Hill Mining Company, Ute Uranium Company and Trabella Uranium Company, all of Cripple Creek, are only a few of the former gold and other metal producers that are now in the Slick Rock area producing and exploring for uranium.

SUMMIT COUNTY

Since 1947 the Wellington Mine at Breckenridge, under the able management of W. L. Davenport, has been by far the largest producer of metal. In spite of the lower metal prices 1954 production at the Wellington was held at a profitable level. Ten other mines, including several at Montezuma, added to the total producion of Summit County. The Boss Mine in the Gore Range north of Dillon is being rehabilitated and a mill constructed to work the present dump ores. Kyle and Thomas continued work on the Big Four Mine on the edge of the Green Mountain Dam.

TELLER COUNTY

The Golden Cycle Mill which was designed to mill 1000 tons of ore per day could only mill about half that much during 1954, in spite of the fact that all ore in the district went to this mill for processing. There were twelve underground and fifteen dump operations supplying the ore tonnage. Of the total ore milled at the Golden Cycle Mill only about 160 tons daily were freshly mined ore, the other 340 tons came from old mine dumps. The Ajax Mine had the best ore with an average grade of about $30.00 per ton, other mine ores averaged from $15.00 to $25.00 and when all were mixed with the dump ores the average value of the ore milled was about $12.50 per ton. The value of the gold produced was only slightly lower than the amount produced in 1953. The Grace Greenwood operations were halted a short time after water broke into new workings and flooded them. The mine was pumped out and ore shipments were again resumed. Work continued throughout the year in the drainage lateral from the Ajax to the Cresson Mines. Excellent ore was encountered by the Front Range Mines, Inc. in their Strong Mine and much exploration and development work is planned for the coming year. A great many mining companies in Teller County are closing their mines and going into uranium exploration and development.

PRODUCTION BY COUNTIES

1954

ADAMS COUNTY * BRIGHTON

Area 1251 square miles

Gold	$ 33,250
Silver	127
Total	$ 33,377
Petroleum	$ 3,134,992
TOTAL PRODUCTION FOR COUNTY	$ 3,168,369

ARAPAHOE COUNTY * LITTLETON

Area 820 square miles

Uranium	Restricted

ARCHULETA COUNTY * PAGOSA SPRINGS

Area 1364 square miles

Petroleum	$ 524,562
TOTAL PRODUCTION FOR COUNTY	$ 524,562

BOULDER COUNTY * BOULDER

Area 758 square miles

Gold	$ 4,550
Silver	4,344
Copper	4,157
Lead	16,320
Tungsten	3,062,300
Total	$ 3,091,671
Clay	$ 4,490
Fluorspar	1,130,000
Peat	35,000
Building stone	1,239,900
Crushed stone	21,200
Sand and gravel	300,000
Total	$ 2,730,590
Petroleum	$ 5,042
TOTAL PRODUCTION FOR COUNTY	$ 5,827,303

CHAFFEE COUNTY * SALIDA

Area 1040 square miles

Gold	$ 700
Silver	398
Lead	2,448

Zinc	2,220
Beryl	270
Total	$ 6,036
Calcium phosphate	$ 1,680
Feldspar	225,000
Fluorspar	538,169
Crushed stone	2,200
Limestone	901,095
Monumental stone	24,200
Gypsum	102,000
Mica	7,300
Total	$ 1,801,644
TOTAL PRODUCTION FOR COUNTY	$ 1,807,680

CLEAR CREEK COUNTY * GEORGETOWN

Area 395 square miles

Gold	$ 37,725
Silver	32,582
Copper	8,316
Lead	29,920
Zinc	444
Beryl	2,100
Total	$ 111,087
Feldspar	$ 740
TOTAL PRODUCTION FOR COUNTY	$ 111,827

COSTILLA COUNTY * SAN LUIS

Area 1220 square miles

Volcanic cinder	$ 64,870
TOTAL PRODUCTION FOR COUNTY	$ 64,870

CUSTER COUNTY * WESTCLIFFE

Area 738 square miles

Gold	$ 3,850
Silver	1,014
Lead	1,088
Zinc	1,220
Total	$ 7,172
Monumental stone	$ 11,200
Perlite	43,366
Total	$ 54,566
TOTAL PRODUCTION FOR COUNTY	$ 61,738

DOLORES COUNTY * DOVE CREEK

Area 1029 square miles

Gold	$ 4,550
Silver	107,882
Copper	26,730
Lead	595,680
Zinc	555,000
TOTAL PRODUCTION FOR COUNTY	$ 1,289,842

DOUGLAS COUNTY * CASTLE ROCK

Area 844 square miles

Clay	$ 79,091
Limestone	1,918
Silica rock	4,032
TOTAL PRODUCTION FOR COUNTY	$ 85,041

EAGLE COUNTY * EAGLE

Area 1686 square miles

Gold	$ 360,500
Silver	1,891,764
Copper	1,227,100
Lead	652,800
Zinc	4,131,420
Total	$ 8,263,584
Volcanic cinder	$ 900
TOTAL PRODUCTION FOR COUNTY	$ 8,264,484

EL PASO COUNTY * COLORADO SPRINGS

Area 2159 square miles

Clay	$ 119,403
Crushed stone	11,700
Limestone	206,511
Sand and gravel	1,988,300
TOTAL PRODUCTION FOR COUNTY	$ 2,325,914

FREMONT COUNTY * CANON CITY

Area 1562 square miles

Beryl	$ 3,018
Tantalum	175
Total	$ 3,193
Clay	$ 35,000
Cement	2,958,637
Dolomite	130,350
Feldspar	13,494
Gypsum	93,215

Limestone	978,167
Mica	1,885
Monumental stone	3,000
Plaster	78,322
Silica rock	35,456
Terrazzo chips (marble)	23,456
Travertine (building stone)	212,100
Total	$ 4,563,082
Petroleum	$ 76,332
TOTAL PRODUCTION FOR COUNTY	$ 4,642,607

GARFIELD COUNTY * GLENWOOD SPRINGS

Area 3000 square miles

Limestone	$ 49,239
TOTAL PRODUCTION FOR COUNTY	$ 49,239

GILPIN COUNTY * CENTRAL CITY

Area 149 square miles

Gold	$ 8,400
Silver	2,117
Copper	1,782
Lead	2,720
Zinc	666
Tungsten	728
Total	$ 16,413
Peat	$ 6,500
TOTAL PRODUCTION FOR COUNTY	$ 22,913

GRAND COUNTY * HOT SULPHUR SPRINGS

Area 1869 square miles

Uranium	Restricted

GUNNISON COUNTY * GUNNISON

Area 3243 square miles

Gold	$ 8,400
Silver	2,217
Lead	2,720
Beryl	20,000
Lepidolite	18,000
Tungsten	400
Total	$ 51,737
Mica	$ 4,200
TOTAL PRODUCTION FOR COUNTY	$ 55,937

HINSDALE COUNTY * LAKE CITY

Area 1062 square miles

Gold	$ 350
Silver	290
Lead	1,088
Zinc	200
TOTAL PRODUCTION FOR COUNTY	$ 1,928

JACKSON COUNTY * WALDEN

Area 1628 square miles

Fluorspar	$ 1,358,831
Petroleum	324,472
TOTAL PRODUCTION FOR COUNTY	$ 1,683,303

JEFFERSON COUNTY * GOLDEN

Area 791 square miles

Gold	$ 9,100
Silver	36
Copper	1,100
Beryl	11,200
Total	$ 21,436
Clay	$ 459,242
Feldspar	25,000
Sand and gravel	4,000,000
Mica	150
Total	$ 4,484,392
TOTAL PRODUCTION FOR COUNTY	$ 4,505,828

LAKE COUNTY * LEADVILLE

Area 384 square miles

Gold	$ 183,260
Silver	121,277
Copper	29,700
Lead	535,840
Zinc	538,360
Manganese	1,400
Molybdenum	45,192,856
Tungsten	2,511,567
Total	$49,114,260
Peat	$ 4,200
Silica rock	4,112
Total	$ 8,312
TOTAL PRODUCTION FOR COUNTY	$49,122,572

LA PLATA COUNTY * DURANGO

Area 1691 square miles

Gold	$ 21,350
Silver	452
Total	$ 21,802
Petroleum	$ 26,970
TOTAL PRODUCTION FOR COUNTY	$ 48,772

LARIMER COUNTY * FORT COLLINS

Area 2640 square miles

Gypsum	$ 101,668
Limestone	159,480
Cement	2,005,479
Total	$ 2,266,627
Petroleum	$ 285,612
TOTAL PRODUCTION FOR COUNTY	$ 2,552,239

LAS ANIMAS COUNTY * TRINIDAD

Area 4798 square miles

Alabaster	$ 7,500
Clay	32,000
TOTAL PRODUCTION FOR COUNTY	$ 39,500

LOGAN COUNTY * STERLING

Area 1849 square miles

Petroleum	$20,256,752
TOTAL PRODUCTION FOR COUNTY	$20,256,752

MESA COUNTY * GRAND JUNCTION

Area 3334 square miles

Sand and gravel	$ 125,000
Uranium and Vanadium	Restricted
TOTAL PRODUCTION FOR COUNTY	$ 125,000

MINERAL COUNTY * CREEDE

Area 923 square miles

Gold	$ 69,300
Silver	212,687
Copper	14,850
Lead	582,080
Zinc	244,200
TOTAL PRODUCTION FOR COUNTY	$ 1,123,117

MOFFAT COUNTY * CRAIG

Area 4761 square miles

Uranium and Vanadium	Restricted
Petroleum	$ 2,502,457
TOTAL PRODUCTION FOR COUNTY	$ 2,502,457

MONTEZUMA COUNTY * CORTEZ

Area 2097 square miles

Petroleum	$ 26,265
TOTAL PRODUCTION FOR COUNTY	$ 26,265

MONTROSE COUNTY * MONTROSE

Area 2240 square miles

Uranium and Vanadium	Restricted

MORGAN COUNTY * FORT MORGAN

Area 1300 square miles

Petroleum	$12,770,067
TOTAL PRODUCTION FOR COUNTY	$12,770,067

OURAY COUNTY * OURAY

Area 540 square miles

Gold	$ 98,350
Silver	72,404
Copper	154,440
Lead	315,520
Zinc	164,280
TOTAL PRODUCTION FOR COUNTY	$ 804,994

PARK COUNTY * FAIRPLAY

Area 2178 square miles

Gold	$ 3,500
Silver	100
Lead	544
TOTAL PRODUCTION FOR COUNTY	$ 4,144

PUEBLO COUNTY * PUEBLO

Area 2414 square miles

Clay	$ 211,026
Sand and gravel	2,000,000
TOTAL PRODUCTION FOR COUNTY	$ 2,211,026

RIO BLANCO COUNTY * MEEKER

Area 3264 square miles

Uranium	Restricted
Petroleum	$63,551,130
TOTAL PRODUCTION FOR COUNTY	$63,551,130

ROUTT COUNTY * STEAMBOAT SPRINGS

Area 2331 square miles

Uranium	Restricted
Petroleum	$ 113,010
TOTAL PRODUCTION FOR COUNTY	$ 113,010

SAGUACHE COUNTY * SAGUACHE

Area 3146 square miles

Silver	$ 2,625
Copper	594
Lead	21,760
Zinc	2,644
Total	$ 27,623
Turquoise	$ 8,227
TOTAL PRODUCTION FOR COUNTY	$ 35,850

SAN JUAN COUNTY * SILVERTON

Area 392 square miles

Gold	$ 14,700
Silver	14,752
Copper	6,534
Lead	57,120
Zinc	666
Tungsten	2,500
TOTAL PRODUCTION FOR COUNTY	$ 96,272

SAN MIGUEL COUNTY * TELLURIDE

Area 1284 square miles

Gold	$ 759,500
Silver	557,511
Copper	1,025,140
Lead	1,661,920
Zinc	1,776,000
Bog Iron	54,080
TOTAL PRODUCTION FOR COUNTY	$ 5,834,151

SUMMIT COUNTY * BRECKENRIDGE

Area 616 square miles

Gold	$	15,050
Silver		39,822
Copper		9,504
Lead		307,360
Zinc		266,400
Manganese		3,450
TOTAL PRODUCTION FOR COUNTY	$	641,586

TELLER COUNTY * CRIPPLE CREEK

Area 555 square miles

Gold	$	1,680,000
Silver		6,064
Total	$	1,686,064
Feldspar	$	8,850
Monumental Stone		23,200
Total	$	32,050
TOTAL PRODUCTION FOR COUNTY	$	1,718,114

WASHINGTON COUNTY * AKRON

Area 2530 square miles

Petroleum	$	8,526,377
TOTAL PRODUCTION FOR COUNTY	$	8,526,377

WELD COUNTY * GREELEY

Area 4033 square miles

Petroleum	$	3,391,305
TOTAL PRODUCTION FOR COUNTY	$	3,391,305

* County Seats

ACCIDENTS

The number of mining fatalities was eight or the same as for the year 1953. Three of the fatals were at the mine of the Climax Molybdenum Company which had not had a fatal since August 1951. Had Climax been able to maintain the excellent record the fatalities for 1954 would have set an all-time low record. There were two fatal accidents in mills during the year, one in a quarry, and four in oil well operations.

Falls of rock caused four of the mine fatals, two by falling machinery, one by lack of oxygen and one by bad blasting practice. Electricity caused both mill fatals. Three of the oil well fatals were due to falling parts of machinery and one to burns. The quarry fatality was caused by the victim falling from the rim to the floor of the quarry.

In all industries inspected for safety by the Bureau of Mines there were worked a total of 30,833,536 man hours, or 6,678,912 more than in 1953. Eleven hundred thirty-four accidents caused a loss of 110,208 man shifts, giving a frequency rate of 36.8 per million man hours and a severity rate of 3.58. This is considerably under 1953 and shows everyone to be more safety minded. The frequency and severity rates have been going down each of the last three years and indicates excellent inspection by the Bureau inspectors and cooperation by the operators.

SUMMARY OF ACCIDENTS—1954

	Total man hours	Lost time injuries	Number of days lost	Frequency rate per one million man hours	Severity rate per one thousand man hours
Mines, Surface	5,634,368	71	675	12.6	.119
Mines, Underground	6,278,104	555	60,330	88.4	9.60
Quarries and Clay Pits	718,136	34	6,243	47.0	8.68
Mills, Smelters, Plants, etc.	11,446,776	116	13,729	10.1	1.19
State and Federal Projects	583,352	16	79	27.1	.13
Oil Wells	6,172,800	342	35,152	55.4	5.85
Totals	30,833,536	1,134	110,208	36.8	3.58

This table includes the loss of 90,000 days due to 15 fatalities and 10,350 days due to 26 permanent partial disabilities.

$$\text{Frequency rate}=\frac{\text{No. of injuries x 1,000,000}}{\text{No. of man-hours of exposure}}\qquad \text{Severity rate}=\frac{\text{Total time charges in days x 1,000}}{\text{No. of man-hours of exposure}}$$

FATAL ACCIDENTS—1954

METAL MINING

Date	Name of Person	Employed By	Cause of Death
1- 8-54	James A. Pridmore	Harry M. Williamson Company	Suffocated in stope ore
1-27-54	Joe D. Lopez	Empire Zinc Company	Crushed by slab of rock
1-30-54	John E. Fahrion	John E. Fahrion	Crushed by slab of rock
6- 5-54	Harold T. Bowen	Geranium Mining Company	Premature blast
6-25-54	Truman A. Woods	Climax Molybdenum Company	Suffocated
7-23-54	Alamos Roy Hogland	Climax Molybdenum Company	Crushed by falling rock
9-16-54	Marvin L. Ertz	Climax Molybdenum Company	Struck by slusher
9-28-54	Benjamin J. Tomasi	Idarado Mining Company	Caught between draft door and ore car

QUARRIES

7-29-54	Joseph Earl Glover	James N. Warner	Fell 25 feet into bottom of quarry

MILLS

3-19-54	Burton E. Wright	U. S. Vanadium Company	Electric shock—Fell 12½ feet to floor
6- 6-54	Robert L. Porter	Golden Cycle Corporation	Electrocuted

OIL WELLS

1- 9-54	Glen L. Collier	Falcon Seaboard Drilling Company	Struck by drilling pipe
6- 4-54	Alva L. Shull	Prince Brothers Drilling Company	Gas burns from oil well
7-16-54	Charles E. Shedd	B. F. Allison Drilling Company	Struck by tongs
8-23-54	Cecil Hager	Roto Cone Company	Struck by rod weight

AGENCY CAUSING ACCIDENT

MINES, SURFACE	Temporary Injuries Loss of one day or more
Cable - Hose - Ropes	1
Cable overwind	1
Cars - Motors - Vehicles	13
Chains - Gears - Sprockets	2
Containers	1
Drills - Drilling Equipment	11
Dust and Particles	1
Electricity - Elec. Equipment	2
Falls	3
Falling or Flying Objects	9
Flames - Fire - Hot Substances	2
Hoists - Hoisting Apparatus	1
Machinery	9
Materials	3
Metal Objects	5
Rock - Ore - Ground	2
Timber - Lumber - Poles	4
Unclassified - Insufficient Data	1
Total	71

QUARRIES	Fatals		
Cars - Motors - Vehicles		2	
Belts - Conveyors - Pulleys		1	
Containers		1	
Drills - Drilling Equipment		2	
Falls		4	
Falling or Flying Objects		8	
Machinery		1	
Premature or delayed blasts		1	
Rock - Ore - Ground	1	11	
Unclassified - Insufficient Data		2	
Totals	1	33	34

AGENCY CAUSING ACCIDENT

MINES, UNDERGROUND	Fatals	Temporary Injuries Loss of one day or more
Bars - Bins - Chutes		10
Cables - Hose - Ropes		17
Cable overwind		2
Cars - Motors - Vehicles		80
Chains - Gears - Sprockets		3
Belts - Conveyors - Pulleys		1
Containers		4

MINES, UNDERGROUND—Cont.	Fatals	Temporary Injuries Loss of one day or more	
Chemicals - Gas	1	10	
Doors - Windows - Gates	1		
Drills - Drilling Equipment		33	
Dust and Particles		13	
Explosives - Loading, Firing	1	8	
Explosives - Transportation		1	
Electricity - Elec. Equipment		4	
Falls	1	33	
Falling or Flying Objects	2	74	
Flames - Fire - Hot Substances		4	
Hoists - Hoisting Apparatus		10	
Ladders - Manways		8	
Machinery	1	33	
Materials		24	
Metal Objects		22	
Premature or delayed blasts		2	
Rock - Ore - Ground		66	
Screens		3	
Shovels, power		5	
Timber - Lumber - Poles	1	43	
Unclassified - Insufficient Data		35	
Totals	8	547	555

AGENCY CAUSING ACCIDENT

MILLS, SMELTERS, PLANTS, ETC.	Fatals	Temporary Injuries Loss of one day or more	
Bars - Bins - Chutes		3	
Cables - Hose - Ropes		6	
Cars - Motors - Vehicles		7	
Belts - Conveyors - Pulleys		6	
Containers		4	
Chemicals		4	
Doors - Windows - Gates		2	
Drills - Drilling Equipment		1	
Dust and Particles		3	
Electricity - Elec. Equipment	2		
Falls		12	
Falling or Flying Objects		8	
Flames - Fire - Hot Substances		2	
Machinery		16	
Materials		13	
Metal Objects		7	
Rock - Ore - Ground		6	
Tanks		1	
Timber - Lumber - Poles		3	
Unclassified - Insufficient Data		10	
Totals	2	114	116

AGENCY CAUSING ACCIDENT

STATE AND FEDERAL PROJECTS	Temporary Injuries Loss of one day or more
Cars - Motors - Vehicles	5
Containers	1
Electricity - Elec. Equipment	1
Falls	1
Falling or Flying Objects	1
Machinery	2
Metal Objects	1
Rock - Ore - Ground	1
Timber - Lumber - Poles	1
Unclassified - Insufficient Data	2
Total	16

AGENCY CAUSING ACCIDENT

OIL WELLS	Fatals	Temporary Injuries Loss of one day or more	
Bar - Bins - Chutes		1	
Cables - Hose - Ropes		9	
Cable overwind		1	
Cars - Motors - Vehicles		15	
Chains - Gears - Sprockets		2	
Belts - Conveyors - Pulleys		3	
Containers		1	
Chemicals		1	
Derricks - Headframes		20	
Doors - Windows - Gates		3	
Drills - Drilling Equipment	2	119	
Dust and Particles		30	
Falls		27	
Falling or Flying Objects	2	17	
Flames - Fire - Hot Substances		27	
Ladders - Manways		1	
Machinery		7	
Materials		20	
Metal Objects		14	
Platforms - Staging - Scaffolds		1	
Tanks		1	
Timber - Lumber - Poles		2	
Unclassified - Insufficient Data		16	
Totals	4	338	342

MINES, SURFACE

TYPE OF INJURY	Temporary Injuries Loss of one day or more
Burns	4
Caught in or between	8
Fall on the same level	4
Handling	11
Striking against - Struck by	41
Unclassified - Insufficient Data	3
Total	71

NATURE OF INJURY	
Foreign Bodies	6
Cuts - Bruises - Lacerations - Punctures	30
Strains - Sprains - Dislocation	19
Amputation	2
Burns - Scalds	4
Occupational Disease	1
Nature Unknown	9
Total	71

SITE OF INJURY	
Eye	5
Head - Face - Neck	3
Trunk	18
Upper Extremities	16
Lower Extremities	20
General	2
Insufficient Data	7
Total	71

MINES, UNDERGROUND

TYPE OF INJURY	Fatals	Temporary Injuries Loss of one day or more	
Burns	1	15	
Caught in or between		59	
Fall on the same Level		28	
Fall on different Level		20	
Handling		128	
Inhalation - Suffocation	2	10	
Striking against - Struck by	5	224	
Slip - Stepping on		42	
Unclassified - Insufficient Data		21	
Totals	8	547	555

NATURE OF INJURY	Fatals	Temporary Injuries Loss of one day or more	
Foreign Bodies		33	
Cuts - Bruises - Laceration - Punctures	1	229	
Strains - Sprains - Dislocation	1	158	
Hernia	1	8	
Fractures	3	72	
Amputation		8	
Burns - Scalds	1	15	
Occupational Disease	1	13	
Nature Unknown		11	
Totals	8	547	555

SITE OF INJURY	Fatals	Temporary Injuries Loss of one day or more	
Eye		44	
Head - Face - Neck	1	47	
Trunk	4	150	
Upper Extremities		133	
Lower Extremities		155	
General	3	15	
Insufficient Data		3	
Totals	8	547	555

QUARRIES

TYPE OF INJURY	Fatals	Temporary Injuries Loss of one day or more	
Fall on same Level		3	
Handling		7	
Striking against - Struck by	1	21	
Slip - Stepping on		1	
Unclassified - Insufficient Data		1	
Totals	1	33	34

NATURE OF INJURY	Fatals	Temporary Injuries Loss of one day or more	
Foreign Bodies		2	
Cuts - Bruises - Laceration - Punctures		17	
Strains - Sprains - Dislocation		8	
Fractures	1	5	
Nature Unknown		1	
Totals	1	33	34

SITE OF INJURY	Fatals	Temporary Injuries Loss of one day or more	
Eye		2	
Head - Face - Neck	1		
Trunk		9	
Upper Extremities		10	
Lower Extremities		11	
General		1	
Totals	1	33	34

MILLS AND SMELTERS

TYPE OF INJURY	Fatals	Temporary Injuries Loss of one day or more	
Burns		12	
Caught in or between		15	
Fall on the same Level		8	
Fall on different Level	1	5	
Handling	1	25	
Inhalation - Suffocation		2	
Striking against - Struck by		36	
Slip - Stepping on		8	
Unclassified - Insufficient Data		3	
Totals	2	114	116

NATURE OF INJURY			
Foreign Bodies		7	
Cuts - Bruises - Laceration - Punctures		33	
Strains - Sprains - Dislocation		30	
Hernia		2	
Fractures	1	21	
Amputation		4	
Burns - Scalds	1	13	
Occupational Disease		3	
Nature Unknown		1	
Totals	2	114	116

SITE OF INJURY			
Eye		11	
Head - Face - Neck		9	
Trunk		23	
Upper Extremities		31	
Lower Extremities		34	
General	2	4	
Insufficient Data		2	
Totals	2	114	116

STATE AND FEDERAL PROJECTS

TYPE OF INJURY	Temporary Injuries Loss of one day or more
Burns	1
Caught in or between	2
Fall on the same Level	1
Handling	4
Striking against - Struck by	5
Slip - Stepping on	2
Unclassified - Insufficient Data	1
Total	16

NATURE OF INJURY	
Cuts - Bruises - Laceration - Punctures	8
Strains - Sprains - Dislocation	5
Fractures	1
Burns - Scalds	1
Nature Unknown	1
Total	16

SITE OF INJURY	
Eye	1
Trunk	4
Upper Extremities	2
Lower Extremities	6
Insufficient Data	3
Total	16

OIL WELLS

TYPE OF INJURY	Fatals	Temporary Injuries Loss of one day or more	
Burns	1	34	
Caught in or between	1	56	
Fall on same Level		23	
Fall on different Level		13	
Handling		34	
Inhalation - Suffocation		2	
Striking against - Struck by	2	138	
Slip - Stepping on		26	
Unclassified - Insufficient Data		12	
Totals	4	338	342

NATURE OF INJURY	Fatals	Temporary Injuries Loss of one day or more	
Foreign Bodies		8	
Cuts - Bruises - Laceration - Punctures		134	
Strains - Sprains - Dislocation		58	
Hernia	1	1	
Fractures	2	78	
Amputation		11	
Burns - Scalds	1	37	
Nature Unknown		11	
Totals	4	338	342
SITE OF INJURY			
Eye		19	
Head - Face - Neck	2	30	
Trunk		70	
Upper Extremities		116	
Lower Extremities		97	
General	2	2	
Insufficient Data		4	
Totals	4	338	342

MEN EMPLOYED—1954

The number of men employed by the mineral industry again showed an increase with most of the increase in the uranium and oil areas of the State.

	Mines		Mills Smelters		Quarries Clay Mines		Placers		Projects	Oil Wells
	No.	Men	No.	Men	No.	Men	No.	Men	Men	Men
District 1....	86	397	21	413	34	183	9	52	118	1972
District 2....	41	280	9	258	46	192	..	..	178	270
District 3....	66	2301	15	2047	12	77	4	16	174	238
District 4....	295	2619	16	1870	1	3	..	..	93	92
TOTALS..	487	5597	61	4588	93	455	13	68	563	2572

TOTAL MEN EMPLOYED

	Underground	Surface	Oil Wells	Totals
District No. One	313	850	1972	3135
District No. Two	195	713	270	1178
District No. Three	1310	3305	238	4853
District No. Four	1321	3264	92	4677
TOTALS	3139	8132	2572	13,843

INSPECTIONS

The number of inspections made during the year increased only thirty-eight, which means that the number of men employed as inspectors has just about reached the limit of the number of places which they can properly inspect in the time allotted. As it is, there are many uranium mines with small ore bodies which are mined out in a short time and a great many oil wells which drill out quickly, that are never seen by the inspectors. In order to keep up with the known operating mines and drilling wells there just is not sufficient time to run down new and unknown places. At best there are many inspections which are sketchy and unsatisfactory, but no matter how it is tried, a fixed number of inspectors can only make a certain number of good inspections in a year.

1954 INSPECTIONS

MADE BY
MINE INSPECTORS, DISTRICTS Nos. 1, 2, 3, 4

1954	District 1 Chapman	District 2 Theobald	District 3 Doyle	District 4 Ray & Franz	Total
January	22	9	10	13	54
February	20	15	16	24	75
March	43	20	16	49	128
April	44	10	19	34	107
May	18	6	23	38	85
June	30	9	5	37	81
July	10	4	6	19	39
August	16	2	8	18	44
September	13	44	15	21	93
October	6	..	7	17	30
November	24	10	4	30	68
December	31	12	7	34	84
	277	141	136	334	888

INSPECTIONS IN 1954

	Mines	Quarries Clay Mines	Mills Smelters	Placers	Projects	Oil Wells	Total
District 1	83	12	17	11	..	154	277
District 2	66	42	8	4	1	20	141
District 3	50	23	29	3	7	24	136
District 4	287	1	27	..	6	13	334
	486	78	81	18	14	211	888

INFORMATION REPORTS

In addition to their regular reports of safety conditions of each property they visit, the inspectors make short informative reports of general conditions. This form of report is used on mines too small to have a complete inspection made, prospects that are just getting started and other new places that expect to start in a short time, changes that are made around existing mine operations and a once-a-year check on operating properties. This is a new type of report and will be prepared with the idea of giving the general public the kind of information they require. No doubt many changes will be necessary to work out a form that will be completely satisfactory and another year of experimenting may be necessary.

1954 INFORMATION REPORTS

1954	District 1 Chapman	District 2 Theobald	District 3 Doyle	District 4 Ray & Franz	Total
January	2	..	..	83	85
February	6	..	..	14	20
March	2	..	1	..	3
April	5	..	7	2	14
May	1	..	1	1	3
June	10	..	1	2	13
July	1	..	1	2	4
August	11	..	7	8	26
September	2	39	1	1	43
October	2	5	8	39	58
November	1	..	..	..	1
December	5	14	7	23	45
	48	58	34	175	315

INFORMATION REPORTS 1954

	Mines	Quarries Clay Mines	Mills Smelters	Placers	Projects	Oil Wells	Total
District 1	30	2	3	3	1	9	48
District 2	20	29	4	1	4	..	58
District 3	17	5	3	2	3	4	34
District 4	149	..	13	1	..	12	175
	216	36	23	7	8	25	315

TOTAL INSPECTIONS, PARTIAL INSPECTIONS AND INFORMATION DATA

District 1	District 2	District 3	District 4	Total
325	199	170	509	1203

LIST OF OPERATING MINES IN VARIOUS COUNTIES IN COLORADO—1954

OPERATING MINES IN BOULDER COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
April Fool-Good Friday	Sugarloaf	Jump Mining Co.	916-14th St., Boulder	Tungsten
Argo	Jamestown	Harry M. Williamson	107 Pearl St., Denver 9	Fluorspar
Banzana		Bodner Brothers	500 Grant St., Louisville	Ferberite tungsten
Blue Jay	Jamestown	Harry M. Williamson	107 Pearl St., Denver 9	Fluorspar
Burlington	Jamestown	General Chemical Div., Allied Chemical & Dye Corp.	Box 228, Boulder	Fluorspar
Caribou	Caribou	Nederland Mines, Inc.	1406 Pearl St., Boulder	Silver, Lead
Cold Springs	Nederland	Cold Springs Tungsten Inc.	403 Interstate Trust Bldg., Denver 2	Tungsten
Comstock	Ward	Gold Range, Inc.	Ward	Exploration
Comstock & Pandora	Caribou	Pandora Metals, Inc.	1555 Dayton St., Aurora	Silver, Lead, Zinc
Copeland	Boulder Canyon	Rocky Mountain Mining & Milling Co.	Box 214, Jamestown	Tungsten
Cross	Nederland	Thomas Linder	Nederland	Tungsten
Elsie	Nederland	Thau & Stark	3101-7th St., Boulder	Tungsten
Emmett	Jamestown	Harry M. Williamson & Co.	Jamestown	Fluorspar
Eureka	Boulder Canyon	Eureka Tungsten Co.	3255 S. Cherokee St., Englewood	Tungsten
Fraction	Sugarloaf	Fraction Mining Co.	319 Platte St., Longmont	Tungsten
Gold Coin & Princess Group	Sugarloaf	Boulder Tungsten Mines, Inc.	704 Equitable Bldg., Denver 2	Tungsten
Hildegarde	Nederland	C. H. Smith & Co.	2000 Marine St., Boulder	Tungsten
Hillside	Sugarloaf	Schoy & Overly	Route 2, Box 444, Boulder	Tungsten
Hoosier	Nederland	Johnson Brothers & Prime	Nederland	Tungsten
Katie	Sugarloaf	Boulder Tungsten Mines, Inc.	Box 441, Boulder	Tungsten
Lucky Lady	Sugarloaf	Al Rogers	Sugarloaf	Tungsten
1905	Nederland	Jack Payne	Nederland	Tungsten
Ohio	Sugarloaf	Harrison Cobb & A. B. Weldon	401 Pine St., Boulder	Tungsten
Poopout	Sugarloaf	J. L. Starnes	2609 Dexter St., Denver 7	Tungsten
Poorman	Caribou	Gibson Investment, Inc.	Route 4, Box 78½, Greeley	Gold
Quaker	Sugarloaf	C. H. Smith & Co.	2000 Marine St., Boulder	Tungsten
Rafter Lease	Sugarloaf	Paul Ruhter	1734 Walnut St., Boulder	Tungsten
Rambler	Nederland	Joe Smith	Nederland	Tungsten
Spartan No. 5	Jamestown	Clark H. Clark	Box 214, Jamestown	Fluorspar
Town Lot	Nederland	Edward Bishop	Nederland	Tungsten
Tungsten	Nederland	Tungsten Mining Co.	c/o George W. Cowdery, 420 Pine St., Boulder	Tungsten
Utica	Ward	Gold Range Mines Inc.	c/o H. Easterday, Mgr., Ward	Tungsten
Vasco No. 5	Nederland	Hetzer Mines Inc.	Box 150, Boulder	Tungsten

OPERATING MINES IN CHAFFEE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Forest Queen & Denver No. 3	Red Mountain	F. & S. Mining Co.	c/o John Harvey, 2900 Champa St., Denver 5	Gold, Silver
Josephine Lode	Buena Vista	Beryl DeBerry	West 7th St., Leadville	Exploration
Last Chance	Baldwin Gulch	M. & M. Mining Co.	Nathrop	Fluorspar
Lucky	Poncha Pass	Mining Ventures Inc.	303 Bon Durant Bldg., Pueblo	Tungsten
MacKeen Claims 1, 2, 3	Taylor Mountain	Harold MacKeen	542 G St., Salida	Silver, Lead, Copper
Mary Murphy	St. Elmo	Walter Burleson	Box 209, Salida	Gold, Silver, Lead, Zinc
Poncha Fluorspar Mine	Poncha Springs	Reynolds Mining Corp.	Box 169, Salida	Fluorspar
Stonewall	St. Elmo	H. F. Kane	Poncha Springs	Silver, Lead, Zinc

OPERATING MINES IN CLEAR CREEK COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Alma Lincoln	Spanish Bar	Clyde Lyon	Route 4, Box 144, Wideacres, Golden	Tourist
Argo Tunnel	Idaho Springs	George S. Groves	405 Interstate Trust Bldg., Denver 2	Development
Blazing Star	Fall River	Ed C. Rice	Idaho Springs	Exploration
Dixie	Ute Creek	LeRoy Giles & Co.	Idaho Springs	Gold
Forgehill Tunnel	Virginia Canon	C. E. Morrison	Route 3, Box 367, Golden	Gold, Silver, Lead Zinc, Copper
Golconda Tunnel	Fall River	Ed C. Rice	Idaho Springs	Exploration
Grover	Beaverbrook Canon	Joe Grover	Box 1, Route 1, Evergreen	Feldspar, Mica, Beryl
Highlander	Idaho Springs	Uncompahgre Uranium Co.	Box 114, Grand Junction	Uranium, Lead
Jo Reynolds	Lawson	Reynolds Uranium Corp.	403 Interstate Trust Bldg., Denver 2	Silver, Lead, Pitchblende
Lake West	Virginia Canyon	William Kirschmer	Idaho Springs	Lead, Zinc
Lamertine	Idaho Springs	Lamertine-Harrison M&M Co.	c/o George F. Calloway, Idaho Springs	Exploration
Lone Star	Clear Creek Canyon	R. W. Carroll	395 Allison St., Lakewood	Development
Mendota	Silver Plume	Mendota Frostberg Mining Co.	Box 6630, Denver 16	Exploration
Miami (Wilcox) Tunnel	Idaho Springs	Colorado School of Mines, Mining Dept.	Golden	Experimental
Nabob	Lawson	Nabob Mining Co.	c/o C. R. Froman, Majestic Bldg., Denver 2	Silver, Lead, Zinc
Old Settler	Banner Gulch	Harry L. Sinclair Co.	2224 Welton St., Denver 5	Gold, Copper
Patton	Virginia Canyon	McPherson Mining Co.	1427 Gaylord St., Denver 6	Exploration
Remington Tunnel	Idaho Springs	Fred Metz	Idaho Springs	Development
Silver Cloud	Lawson	Andy Riebel	Silver Plume	Exploration
Smuggler	Silver Plume	Smuggler Mining Co.	c/o L. P. Schreiner, Georgetown	Silver, Lead, Zinc
Stanley	Idaho Springs	Stanley Mines	Box 776, Idaho Springs	Lead, Zinc, Gold

Star Tunnel	Idaho Springs	Robert Hicks	Idaho Springs	Tourist
Urad	Empire	Molybdenum Corp. of America	500 Fifth Ave., New York 36, N. Y.	Molybdenum
Zero	Silver Plume	Silver King Mining Co.	Box 6, Silver Plume	Exploration

OPERATING MINES IN CUSTER COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Defender	White Hills	Defender Mining Co.	Silver Cliff	Silver, Lead, Zinc
Herman	Westcliffe	Passiflora Mining Co.	Box 749, Canon City	Silver, Lead, Copper
Tantalizer (Peerless Tunnel)	Spruce Creek	Tantalizer Mining Co. of Colorado, Inc.	Box 184, Westcliffe	Copper, Tantalum

OPERATING MINES IN DELTA COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Doty	Delta	Atlas Mining & Manufacturing Co.	410 Main St., Delta	Sulphur

OPERATING MINES IN DOLORES COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Argentine Tunnel	Rico	Rico Argentine Mining Co.	Rico	Gold, Silver, Lead, Zinc, Pyrite, Copper
Mountain Springs	Rico	Rico Argentine Mining Co.	Rico	Gold, Silver, Lead, Zinc, Pyrite, Copper
Payroll Tunnel	Rico	Minerals M&M, Inc.	Rico	Silver, Lead, Zinc
St. Louis Claim	Rico	Myron Jones & Assoc.	Rico	Exploration
St. Louis Tunnel	Rico	Rico Argentine Mining Co.	Rico	Gold, Silver, Lead, Zinc, Pyrite, Copper

OPERATING MINES IN EAGLE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Eagle	Gilman	Empire Zinc Div., New Jersey Zinc Co.	Gilman	Silver, Lead, Zinc, Copper
Lady Belle	Horse Mountain	Silver Eagle Mining Co.	Eagle	Development
Morning	Gold Park	Sigwart & Randall	Box 901, Leadville	Lead, Zinc

OPERATING MINES IN FREMONT COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Crest	Cotopaxi	CoHio Uranium Corp.	Saguache	Uranium
Jack of Diamonds	Copper Gulch	Robert E. Harris	1528 E. Orman Ave., Pueblo	Exploration
St. Mary No. 2	McIntyre Gulch	Frank Kistler & Assoc.	Hot Springs Lodge, Glenwood Springs	Uranium

OPERATING MINES IN GARFIELD COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
End of the Trail	New Castle	W. L. Weaver	Box 114, Silt	Uranium, Vanadium
Oil Shale Mine	Rifle	U. S. Bureau of Mines	New Customs Bldg., Denver 2	Oil Shale

OPERATING MINES IN GILPIN COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Alps	Quartz Hill	Atomic Uranium Corp.	c/o G. C. Ridland, 405 Interstate Trust Bldg., Denver 2	Uranium exploration
Calhoon	Quartz Hill	The Realty Co.	937 U.S. Nat. Bank Bldg., Denver 2	Gold, Lead, Uranium
Canadaigua	Central City	William C. Russell, Jr.	Central City	Gold, Lead, Zinc
Carroll	Central City	United Mining & Leasing Co.	Central City	Gold, Silver, Lead, Zinc, Uranium
Cherokee	Queen Mineral Ranch	Cherokee Uranium Mining Corp.	609 Equitable Bldg., Denver 2	Uranium development
Clara-Marie	Central City	Central City Uranium Co.	Box 342, Central City	Exploration
Day Spring	Quartz Hill	William E. Landau	805 E. 18th Ave., Denver 2	Gold, Silver, Lead, Zinc
German	Quartz Hill	Intercounty Corp.	c/o G. C. Ridland, 405 Interstate Trust Bldg., Denver 2	Gold, Uranium
Little Colonel	Black Hawk	Jack Turner	Black Hawk	Tourist
Lone Star Lode	Missouri Gulch	Roy & W. J. Addyman	Central City	Silver, Lead, Copper
Lost Gold	Central City	L. H. Shobert	Central City	Tourist
Mammoth	Central City	William Fackler	Box 135, Route 2, Idaho Springs	Gold, Silver, Lead, Zinc
Meeker-Success	Russell Gulch	Allen Uranium Exploration Development Co.	1409 Washington St., Golden	Gold, Silver, Lead, Zinc, Copper
Telegraph	Central City	Gilpin County Uranium Corp.	2101 Illinois St., Golden	Gold, Silver, Lead, Zinc
Toll Gate	Black Hawk	Mike McNulty	Black Hawk	Tourist
Two Sisters	Central City	United Mining & Leasing Co.	c/o Claude McKay, Central City	Gold, Silver, Lead, Zinc, Uranium
Williams Tunnel	Black Hawk	Consolidated Gold Uranium Corp.	c/o Walter Plankington, 1454 S. Broadway, Denver 3	Gold Exploration

OPERATING MINES IN GRAND COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Fair U	Old Stormy	Karl N. Soder	c/o Paul Hunt, Steamboat Springs	Uranium, Vanadium
Undecided Group	Beaver Creek	Newmont Exploration, Ltd.	Box 99. Montrose	Uranium, Vanadium

OPERATING MINES IN GUNNISON COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Brown Derby	Parlin	Adolph Poston	4th & Macon Sts., Canon City	Michrolite, Lepidolite, Beryllium
Carter	Ohio City	Kanarado Mining & Development Co.	500 Summer Ave., Littleton	Gold, Silver, Lead
Flanders Mining Co.	Gold Hill	Flanders Mining Co.	Box 861, Grand Junction	Tungsten
Hot Rock Group	Tincup	Hugh Corrigan	Almont	Development
Hubernite	Cumberland Pass	Mesa Verde Uranium Co.	808 Boston Bldg., Denver 2	Exploration
Keystone	Crested Butte	American Smelting & Refining Co.	Crested Butte	Exploration
Lilly Belle (Old Faithful)	Iola	Lilly Belle Mining & Milling Co.	Gunnison	Exploration
Little Darling	Rock Creek	Little Darling Mines	c/o Donald Knight, Marble	Gold, Silver, Lead, Copper
Old Lot	Powderhorn	John Peterson	Delta	Exploration
Star	Taylor Park Dam	John Lambertson	Box 567, Gunnison	Silver, Lead

OPERATING MINES IN HINSDALE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Black Crook	Lake San Cristobal	Frank M. Mendenhall	Box 203, Lake City	Gold, Silver, Lead
Hoosier Boy	Lake City	C. J. Van Buskirk & Assoc.	Lake City	Development

OPERATING MINES IN HUERFANO COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Ojo	La Veta Pass	New Park Mines Co.	904 Walker Bank Bldg., Salt Lake City, Utah	Uranium

OPERATING MINES IN JACKSON COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Dave Junior Claim	Rabbit Ears Pass	C. D. Nesterhoff	2944 Wyandotte St., Denver 11	Manganese
Northgate	North Gate	Ozark-Mahoning Mining Co.	Cowdrey	Fluorspar

OPERATING MINES IN JEFFERSON COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Bob & Lee	Ralston Creek	Ralston Butler Mining Co.-Moskal Leasing Co.	7200 W. 52nd Ave., Arvada	Exploration
Leyden Shaft	Leyden	Moreno Uranium Corp.	1009-17th St., Denver 2	Uranium
Moskal Leasing Co.	Ralston Creek	Moskal Leasing Co.	245 Sherman St., Denver 3	Uranium
Ralston Creek	Ralston Creek	Fred Schwartzwalder	207 Boyd St., Golden	Uranium

OPERATING MINES IN LAKE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Betty Fraction Lode	Printer Boy Hill	A. M. Gross	6363 Wilshire Blvd., Los Angeles, Calif.	Development
Bi-Metallic	Long Dory Hill	Louis Kostellic	203 W. 3rd St., Leadville	Gold, Silver, Lead
Climax Mines	Climax	Climax Molybdenum Co.	Climax	Molybdenum
Eclipse, Irene No. 2 & Sunday	Leadville	American Smelting & Refining Co.	Leadville	Lead, Zinc
Fannie Rawlings	Johnny Hill	Cossa Mines Investment Corp.	c/o Warren Prosser, 414 Cooper Bldg., Denver 2	Gold, Silver, Lead, Zinc
Giant Lode	California Mining Dist.	Rollo W. Shaffer, Jr.	Box 622, Climax	Silver, Pyrite
Hayden	Fryer Hill	Cadwell Mining Co.	2475 Gray St., Denver 14	Lead, Zinc
Helena	Iowa Gulch	Resurrection Mining Co.	Leadville	Development
Ibex No. 2	Johnny Hill	William Stevens	501 W. 4th St., Leadville	Gold, Silver
Ibex No. 4	Johnny Hill	Webster & Young	400 E. 7th St., Leadville	Gold, Silver. Lead. Zinc
Little Alice	Long & Derry Hill	Ellis Webster	400 E. 4th St., Leadville	Exploration
Millie G. No. 1	Granite	Sidney & Gilbert Green	Granite	Gold, Silver, Lead
Resurrection No. 2	Big Evans Gulch	Robert Jones, Lessee	131 W. 7th St., Leadville	Gold, Silver. Lead, Zinc
Revenue Cutter Tunnel	Little Evans Gulch	Edward Mayerle	219 E. 8th St., Leadville	Exploration
Yak Tunnel	California Gulch	Resurrection Mining Co.	Box 936, Leadville	Gold, Silver. Lead. Zinc

OPERATING MINES IN LA PLATA COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Bessie G.	La Plata Mountain	Zodomok Mines, Inc.	3270 Main Ave., Durango	Gold, Silver
Muldoon	Hesperus	H. E. Knudsen	c/o Herman Dalla, Silverton	Gold, Silver, Quartz
Tomahawk	Basin Creek	J. C. Morris & Assoc.	Route 1, Durango	Exploration
Uranium Queen	Durango	Uranium Enterprise Inc.	c/o L. W. Hiser, 2003 Forest St., Durango	Uranium, Thorium

OPERATING MINES IN LARIMER COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Black Hawk No. 1	Cherokee Park	Prairie Divide Uranium Co.	c/o T. H. Sackett, 231 S. Grant St., Fort Collins	Uranium
Lady Moon	Rustic Resort	Charles C. Riepen	920 Woodford St., Fort Collins	Uranium

OPERATING MINES IN MESA COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
American Uranium Engineering Co.	Beaver Mesa	American Uranium Engineering Co.	Box 1599, Grand Junction	Uranium, Vanadium

Arrowhead No. 1	Calamity Mesa	Wright & Rinderle	438 Sherman, Grand Junction	Uranium, Vanadium
Arrowhead Incline No. 5	Calamity Mesa	A. C. Rinderle	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
Arrowhead Incline No. 6	Calamity Mesa	A. C. Rinderle	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
Arrowhead Incline No. 7	Calamity Mesa	E. C. Hughes	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
Arrowhead Incline No. 12	Calamity Mesa	Fred Zanett	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
Arrowhead Incline No. 13	Calamity Mesa	A. C. Rinderle	438 Sherman, Grand Junction	Uranium, Vanadium
Arrowhead Incline No. 14	Calamity Mesa	A. C. Rinderle	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
Arrowhead Incline No. 17	Calamity Mesa	A. C. Rinderle	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
Belmont No. 2	Calamity Mesa	Porter & Co.	Box G, Nucla	Uranium, Vanadium
Black Mammy	Tenderfoot Mesa	Tenderfoot Mining Co.	Gateway	Uranium, Vanadium
Black Streak	Gateway	C. E. Poland	834 S. 7th St., Grand Junction	Uranium, Vanadium
Bonita No. 1	Blue Mesa	Bonita Uranium Co.	11 Reed Bldg., Grand Junction	Uranium, Vanadium
Calamity No. 6	Calamity Mesa	Lark L. Washburn	Blanding, Utah	Uranium, Vanadium
Calamity Nos. 2, 21, 27	Calamity Mesa	Vernon L. Lehr	Grand Junction	Uranium, Vanadium
Calamity Nos. 13, 17, 20	Calamity Mesa	DeVar Shumway	Blanding, Utah	Uranium, Vanadium
Calamity Nos. 14, 15	Calamity Mesa	Dan E. Kelly	Route 4, Grand Junction	Uranium, Vanadium
Cliff Dweller	Calamity Creek	Glenn Berry	Route 4, Grand Junction	Uranium, Vanadium
Durango No. 2	John Brown Hill	Raye Benham	Dolores	Uranium, Vanadium
East Queen of the Hills	Calamity Mesa	Dale Sturtevant & Harold Williams	Box 1487, Grand Junction	Uranium, Vanadium
Elizabeth No. 9	Blue Mesa	Utida Uranium Corp.	Box 58, Moab, Utah	Uranium, Vanadium
Government No. 1	Outlaw Mesa	Climax Uranium Co.	Grand Junction	Uranium, Vanadium
Government No. 2	Outlaw Mesa	Climax Uranium Co.	Grand Junction	Uranium, Vanadium
Hanson-Negus	Outlaw Mesa	Elmer Neilson	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
Harvey No. 1	Tenderfoot Mesa	Engebretson & Showaker	Route 4, Grand Junction	Uranium, Vanadium
Hidden Treasure	Calamity Mesa	Carl D. Tucker	Grand Valley	Uranium, Vanadium
Jody	Blue Mesa	Dodge Uranium Corp.	524 Cooper Bldg., Denver 2	Uranium, Vanadium
July Lease	Outlaw Mesa	Eugene T. Bonner	Palisade	Uranium, Vanadium
Jumbo No. 1	Calamity Mesa	E. L. Hamrick	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
June Claim	Outlaw Mesa	H. L. Arbogast	Route 4, Grand Junction	Uranium, Vanadium
K. P. G. Uranium Co.	John Brown Hill	K. P. G. Uranium Co.	11 Hazel Ave., Colorado Springs	Uranium, Vanadium
Knot	Outlaw Mesa	Atomic Power Uranium Corp.	404 Empire Bldg., Denver 2	Uranium, Vanadium
La Sal No. 1	John Brown Hill	Lee Hetzel & Assoc.	Clifton	Uranium, Vanadium
La Sal No. 2	John Brown Hill	Flanders Mining Co.	Uranium Engineering Bldg., Grand Junction	Uranium, Vanadium
La Sal Nos. 3, 4, 5, 6	Gateway Area	Utarado Mining Co.	c/o Gilbert Motors, Montrose	Uranium, Vanadium
Liberty Bell	Tenderfoot Mesa	John Ukele	Gateway	Uranium, Vanadium

OPERATING MINES IN MESA COUNTY—Continued

Name of Mine	Location	Operator	P. O. Address	Product
Little Johnnie	Gateway	Amco Uranium Co.	317 Main St., Grand Junction	Uranium, Vanadium
Lost Dutchman	Beaver Mesa	Lost Dutchman Mining Co.	Salt Lake City, Utah	Uranium, Vanadium
Lumsden No. 1	John Brown Hill	Charlie V. Woodard	Gateway	Uranium, Vanadium
Lumsden Nos. 2, 6	John Brown Hill	Ralph Hickman	Route 1, Grand Junction	Uranium, Vanadium
M. C. No. 10	Outlaw Mesa	J. Hicks & Robert Hanes	Route 2, Grand Junction	Uranium, Vanadium
Matchless	Calamity Mesa	Jack Richards & Assoc.	Gateway	Uranium, Vanadium
Mesa No. 5 Incline No. 1	Outlaw Mesa	Herbert W. Foster	1217 Colorado Ave., Grand Junction	Uranium, Vanadium
Mesa No. 5 Incline No. 2	Outlaw Mesa	Herbert W. Foster	1217 Colorado Ave., Grand Junction	Uranium, Vanadium
Pack Rat No. 3	John Brown Hill	Don Danvers	Moab, Utah	Uranium, Vanadium
Pay Rock No. 3	Tenderfoot Mesa	Lee Hetzel	Box 455, Clifton	Uranium, Vanadium
Queen of the Hills	Calamity Mesa	George Charris & William Meese	Rifle	Uranium, Vanadium
Rae Marie No. 3	Blue Mesa	Ace Turner	Moab, Utah	Uranium, Vanadium
Ronnie No. 1	Outlaw Mesa	Otis Fincher	924 Pine St., Grand Junction	Uranium, Vanadium
Ronnie No. 2	Outlaw Mesa	Barnett Brothers	550 Grand Mesa Ave., Grand Junction	Uranium, Vanadium
Shadow Rock Shaft	Rock Creek	Sturgill & Clements	Box 106, Ouray	Uranium, Vanadium
Snow Shoe	Outlaw Mesa	Ralph Foster & Sons	1217 Colorado Ave., Grand Junction	Uranium, Vanadium
Spring No. 1	Outlaw Mesa	Ed McManus	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
Utida	Mesa Creek	Utida Uranium Co.	Moab, Utah	Uranium, Vanadium
Yellow No. 3	Blue Mesa	C. E. Poland	834 S. 7th St., Grand Junction	Uranium, Vanadium
Yellow Jacket Incline No. 9	Arrowhead	Norman Wellman	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
Yellow Jacket Incline No. 15	Calamity Mesa	Wright & Rinderle	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium
Yellow Jacket Incline No. 16	Calamity Mesa	Norman Wellman	c/o Climax Uranium Co., Grand Junction	Uranium, Vanadium

OPERATING MINES IN MINERAL COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Emperius	Willow Creek	Emperius Mining Co.	Creede	Lead, Zinc
Holy Moses	Willow Creek	Jackson Mining Co.	Creede	Gold, Silver, Lead, Zinc
Monon	Sunnyside Creek	Monon Mining Co.	Creede	Development
Phoenix	Willow Creek	Outlet Mining Co.	Creede	Gold, Silver, Lead

OPERATING MINES IN MOFFAT COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Blue Mountain No. 4	Skull Creek	Skull Creek Coalition Mines	c/o N. J. Meagher, Jr., Vernal, Utah	Uranium, Vanadium
Buffalo Head No. 10	Craig	Buffalo Head Mining Co.	Box 964, Craig	Uranium, Vanadium

OPERATING MINES IN MONTEZUMA COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Le-Ru Mining Co.	Dolores	Le-Ru Mining Co.	Box 1499, Cortez	Uranium, Vanadium

OPERATING MINES IN MONTROSE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
A.E.C. Reserve Block No. 1	Club Mesa	Bunker & Co.	Box 62, Nucla	Uranium, Vanadium
A.E.C. Reserve Block No. 2	Club Mesa	Gardner & Co.	Box 252, Naturita	Uranium, Vanadium
Anna May	Monogram Mesa	Joe Skalla	Norwood	Uranium, Vanadium
April No. 1	Bull Canyon	C. W. Burbridge	Naturita	Uranium, Vanadium
Atkinson Shaft	Uravan	Golden Cycle Corp.	Box 448, Uravan	Uranium, Vanadium
Baby Fawn	Bull Canyon	D. P. Springer	Delta	Uranium, Vanadium
Badger	Martin Mesa	Keith & Don Andrews	Box 77, Nucla	Uranium, Vanadium
Beaver	Martin Mesa	Douglas Cleghorn	Uravan	Uranium, Vanadium
Big Dick	Atkinson Mesa	Tom Van Arsdale & Martin Templeton	Uravan	Uranium, Vanadium
Bitter Creek	Long Park	Booth Eckman	Box 163, Naturita	Uranium, Vanadium
Bob Tail	Monogram Mesa	Joe Skalla	Norwood	Uranium
Buckhorn	Martin Mesa	T. R. Linn & Assoc.	Dove Creek	Uranium
Buckhorn No. 3	Carpenter Ridge	A. E. David & Assoc.	Paradox	Uranium
Buckskin	Bull Canyon	Crown Uranium Co.	205 Star Bldg., Casper, Wyoming	Uranium
Captain Jack Group	Monogram Mesa	J. R. Ford	Moab, Utah	Uranium
Cliff Dweller	Atkinson Mesa	Vanadium Corp. of America	Durango	Uranium
Cliff Dweller-Blue Raven	La Salle Canyon	Vanadium Corp. of America	Durango	Uranium
Club No. 2	Club Mesa	Douglas Cleghorn	Uravan	Uranium
Cycle	Carpenter Ridge	Charles Proctor	Paradox	Uranium
Dolores	Uravan	Van Arsdale & Templeton	Nucla	Uranium
Donald L.	Long Park	Milton Castor	Naturita	Uranium
Dusty	Long Park	Vanadium Corp. of America	Durango	Uranium
East Opera Box	Monogram Mesa	C. N. Athey & M. J. Rexroad	Naturita	Uranium
Echo No. 6	Bull Canyon	B. W. Beals & J. Y. Snodgrass	Naturita	Uranium
Effie F.	Uravan	Herman Conrow	Route 3, Grand Junction	Uranium
Eureka	Carpenter Ridge	Consolidated Uranium Co.	Salt Lake City, Utah	Uranium
Evening Star	Paradox	Charles Davis	Bedrock	Uranium
Fawn Spring Nos. 7, 13	Bull Canyon	W. R. Hall	Box 214, Naturita	Uranium
Fawn Spring Nos. 11, 12	Bull Canyon	Glenn Neesham & Elvin Oelrich	Nucla	Uranium
First National	Long Park	L. B. Barnes & Assoc.	Box 235, Naturita	Uranium
Foster	Atkinson Mesa	Herman Conrow	Route 3, Grand Junction	Uranium
Fox	Uravan	Dale Sturtevant & Harold Williams	Box 1487, Grand Junction	Uranium
Greagor	Bull Canyon	J. R. Simplot & Co.	Norwood	Uranium
Great Western	Long Park	R. C. Bishop	Uravan	Uranium
Guadalcanal	Long Park	La Verne Ray	Rifle	Uranium
Happy Thought	Monogram Mesa	Joe Skalla	Norwood	Uranium

OPERATING MINES IN MONTROSE COUNTY—Continued

Name of Mine	Location	Operator	P. O. Address	Product
Henry Clay	Long Park	John W. Morrill	Uravan	Uranium
Hidden Basin	Long Park	Vanadium Corp. of America	Durango	Uranium
Hobo	Bull Canyon	A. J. Trease	Naturita	Uranium
Honeymoon	Long Park	R. C. Bishop	Box 424, Uravan	Uranium
Horse Hair No. 1	Bull Canyon	Porter & Co.	Nucla	Uranium
Hummer	Monogram Mesa	Lowell Staats	Nucla	Uranium
J. J.	Monogram Mesa	Henry O. Lehr	Box 186, Naturita	Uranium
Jitterbug	Carpenter Ridge	Milton Castor	Naturita	Uranium
Joe Jr.	Club Mesa	Frank Fedel	Uravan	Uranium
Lark No. 7	Uravan	M&M Mining Co.	c/o Bob Moore, Nucla	Uranium
La Salle Shaft	Club Mesa	La Salle Mining Co.	Box 217, Grand Junction	Uranium
Little Alice	Wild Steer Canyon	Wild Steer Leasing Co.	Delta	Uranium
Little Basin	Bull Canyon	Harold Kincade	Uravan	Uranium
Little Dick	Uravan	Frank Elder	Box 526, Uravan	Uranium
Log Cabin	Bull Canyon	Magic Uranium Co., Inc.	Moab, Utah	Uranium
Lone Pine	Carpenter Ridge	J. V. Westwood	Moab, Utah	Uranium
Long Park Nos. 1, 13, 16	Long Park	R. D. Johnson	Box 252, Naturita	Uranium
Long Park Nos. 3, 4, 5, 6, 7, 8	Long Park	Frank Fedel & E. T. Holderman	Uravan	Uranium
Long Park No. 12	Long Park	Enos T. Holderman	1221 Main St., Grand Junction	Uranium
Maggie C.	Long Park	G. E. Castor & Assoc.	Nucla	Uranium
Marjorie Ann	Lion Creek	Killiam, Hall, Bronson	Route 4, Montrose	Uranium
Mill No. 2	Club Mesa	J. & M. Jabernick & Assoc.	Box 484, Uravan	Uranium
Mineral Joe Incline No. 1	Monogram Mesa	Richards & Willoughby	c/o Climax Uranium Co., Grand Junction	Uranium
Mineral Joe Shaft No. 1	Monogram Mesa	Climax Uranium Co.	Grand Junction	Uranium
Mineral Park No. 5	Long Park	Haymaker & Morris	c/o Climax Uranium Co., Grand Junction	Uranium
Moon Beam	Long Park	Luther L. Brickey & Assoc.	Uravan	Uranium
Morning Star No. 4	Lion Creek	Mitchener & Price	Ouray	Uranium
Ophir Nos. 1, 2	Uravan	R. Lester Sage	Nucla	Uranium
Oversight	Monogram Mesa	William Barnett	Uravan	Uranium
Peanut	Bull Canyon	J. R. Simplot Co.	Box 116, Norwood	Uranium
Petrified Tree No. 9	Uravan	Max Snow & Roy Stout	Box 597, Telluride	Uranium
Piper No. 1	Carpenter Flats	L. G. Harren	Naturita	Exploration
Production	Long Park	Hugo Johnson	Nucla	Development
Radium King	Carpenter Flats	Robert J. Minton	Box 636, Grand Junction	Uranium
Raven	Little Gypsum Valley	F. V. Binder	Naturita	Uranium
Red Canyon Mining Dist.	Carpenter Flats	Mal Pais Mining Co.	Box 636, Grand Junction	Uranium
Red Flash	Bull Canyon	Aldrich & Dunn	Box 850, Uravan	Uranium
Red Rock	Martin Mesa	William Burnett	Box 310, Ouray	Uranium
Republican	Long Park	Vanadium Corp. of America	Durango	Uranium
Rim Rock	Bull Canyon	W. P. Jones	Blanding, Utah	Uranium

Rim Rock Blues Nos. 2, 3, 5, 7	Bull Canyon	Robert M. Ebbs & Assoc.	Nucla	Uranium
S. R. Fraction	Uravan	Glen E. Lile	Moab, Utah	Uranium
Sandy	Uravan	Douglas Smith & D. Cleghorn	Box 502, Uravan	Uranium
September Morn	Bull Canyon	Phil Hawkins	Blanding, Utah	Uranium
Shamrock	Rock Creek	Griffith Uranium Co.	Uravan	Uranium
Shattuck Denn Shaft	Uravan	Shattuck Denn Mining Co.	Box 878, Uravan	Uranium
St. Patrick	Long Park	Clarence Neilson	Uravan	Uranium
Starlight No. 7	Bull Canyon	Walter Kingery	Box 781, Cortez	Uranium
Starlight No. 8	Bull Canyon	Lee Flora	Naturita	Uranium
Sunrise No. 3	Bull Canyon	Lee Elder	Box 76, Uravan	Uranium
Sunrise No. 4	Bull Canyon	Floyd Blair	c/o Consolidated Uranium Co., Naturita	Uranium
T.N.T. No. 1	Long Park	Hansen Bayles	Blanding, Utah	Uranium
T.N.T. No. 3	Long Park	Vanadium Corp. of America	Durango	Uranium
Teapot Dome	Bull Canyon	Carl Mangum & Assoc.	Blanding, Utah	Uranium
Thunderbolt	Monogram Mesa	Henry O. Lehr	Box 186, Naturita	Uranium
Tramp	Uravan	Edwin C. Walker & Carl B. Mangum	Box 36, Uravan	Uranium
Triangulation	Long Park	D. C. Bunker & Assoc.	Nucla	Uranium
Tripod & Elva S.	Long Park	R. C. Bishop	Uravan	Uranium
Two Bits	Bull Canyon	Ed. Maupin & Assoc.	Nucla	Uranium
Valley View	Carpenter Ridge	T. L. Huckabay	Box 424, Telluride	Uranium
Vanadium King	Long Park	O. E. Smart	Naturita	Uranium
Virgin	Long Park	Henry O. Lehr	Naturita	Uranium
Wedge	La Salle Creek	Donald Young	1020 S. 4th St., Montrose	Uranium
West Opera Box	Monogrom Mesa	Oral Clark & Arthur D. Harris	Box 81, Nucla	Uranium
Whang Doodle	Wild Steer Canyon	L. Lynn	Dove Creek	Uranium
Whitney Shaft	Long Park	Bielz & Snodgrass	Naturita	Uranium
Wild Steer	Monogram Mesa	Vanadium Corp. of America	Durango	Uranium
Worcester Shaft	Uravan	Glenn Zastro	Rifle	Uranium
Yellow Bird	La Salle Creek	Vanadium Corp. of America	Durango	Uranium
Zella	Carpenter Ridge	Pioneer Uranium Corp.	Moab, Utah	Uranium

OPERATING MINES IN OURAY COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Camp Bird	Ouray	King Lease Inc.	Ouray	Lead, Zinc
Edna No. 1	Ironton Park	St. Germain Foundation	Box 545, Ouray	Exploration
Patsy	Ironton Park	Earl Alexander	Box 33, Ouray	Silver, Lead
Treasury Tunnel	Ouray	Idarado Mining Co.	Ouray	Lead, Zinc

OPERATING MINES IN PARK COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Buckskin Joe	Buckskin Gulch	Buckskin Joe Mines, Ltd.	Alma	Lead, Zinc
Champaign	Mosquito Gulch	Treasury Vault Uranium Corp.	505 Colorado Bldg., Denver 2	Exploration
Ling	North Star Mtn.	Cordillera Corp.	Fairplay	Gold, Silver

OPERATING MINES IN RIO BLANCO COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Burrell No. 3	Meeker	Tungsten Uranium, Inc.	1101 Southwest 5th Ave., Portland, Ore.	Uranium
Last Day	Meeker	Tungsten Uranium, Inc.	1101 Southwest 5th Ave., Portland, Ore.	Uranium
Midnight	Meeker	Ray Hasselbush & Henry Zieseniss	Box 491, Rifle	Uranium
North Half of Midnight	Meeker	Carl H. Klinglesmith	Box 424, Rifle	Uranium
Windy Point No. 1	Uranium Peak	Jim Le Danne	Box 782, Rifle	Uranium

OPERATING MINES IN RIO GRANDE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Summitville	Summitville	B. T. Poxson	700 Washington St., Denver 3	Exploration

OPERATING MINES IN ROUTT COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Farwell	Columbine	Colorado Mining Corp.	Steamboat Springs	Exploration

OPERATING MINES IN SAGUACHE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Bear Creek Mining Co.	Greenback Mtn.	Bear Creek Mining Co.	516 Acoma St., Denver 4	Exploration
California (Twins)	Flagstaff Mtn.	W. J. Timney & Joe G. O'Brien	2001 Pinto, Las Vegas, Nev.	Exploration
Cocomongo	Bonanza	Leonard Deay-Reusch	Box 854, Salida	Lead, Zinc
Cora Claim	Rawley Gulch	Walter Timney	2001 Pinto, Las Vegas, Nev.	Development
La Rue	Cochetopa	E. V. Storey	Columbine Hotel, Gunnison	Uranium
Los-Ocho	Cochetopa	Thornberg Mining Co,	160 W. Main St., Grand Junction	Uranium
Navajo	Copper Gulch	B. & W. Mining Co.	525 Park Ave., Salida	Lead, Zinc
Rawley	Bonanza	William Costello	Bonanza	Lead, Zinc
Sky City	Big Park	Wannamaker Mining & Milling Co.	Box 246, Saguache	Development
Thomas-Gunnison	Cochetopa	Joy Manufacturing Co.	Michigan City, Ind.	Uranium
Vallejo	Sosthenes Gulch	Johnston Mining Co., Inc.	Bonanza	Lead, Zinc
Villa Grove Turquoise Lode	Villa Grove	Menless Winfield	Villa Grove	Turquoise
Warwick	Bonanza	Bonanza Consolidated Mining Co., Inc.	Box 854, Salida	Development

OPERATING MINES IN SAN JUAN COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Adams	Gladstone	T. J. Mahoney	944 Belford St., Grand Junction	Tungsten

Black Hawk	Gladstone	U. S. Metals Co.	Silverton	Lead, Zinc
Garry Owen	Cunningham Gulch	Old Hundred Gold Mining Co.	Silverton	Lead, Zinc
Gold King	Gladstone	Colorado Gold King Mines Inc.	Box 186, Silverton	Exploration
Great Eastern	Eureka	Orton & Slade & Assoc.	Silverton	Lead, Zinc
Henrietta	Silverton	United States Metals Co.	Silverton	Lead, Zinc
Kansas City	Gladstone	Graham, Olson & Mertz	Silverton	Exploration
Lark	Silverton	Columbine Leasing Co.	Silverton	Lead, Zinc
Lead Carbonate	Gladstone	Bonita Mining Co.	Silverton	Lead, Zinc
London	Animas Forks	William Erickson	Silverton	Lead, Zinc
Longfellow Shaft	Red Mountain Pass	Warren C. Prosser	Cooper Bldg., Denver 2	Lead, Zinc
Lower Kohler Tunnel	Red Mountain Pass	Eastridge Mining Co.	Box 559, Ouray	Lead, Zinc
May Day	Silverton	Ennis Cole & Assoc.	Silverton	Lead, Zinc
Mogul	Cement Creek	Grant G. Gifford	Silverton	Lead, Zinc
Osceola	Cunningham Gulch	Argyle Mining & Milling Corp.	Box 473, Silverton	Silver, Lead
Pride of the West	Cunningham Gulch	Barney Blackmore & Assoc.	Silverton	Silver, Lead
Shenandoah Dives Mining Co.	Silverton	Shenandoah Dives Mining Co.	Silverton	Lead, Zinc

OPERATING MINES IN SAN MIGUEL COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
American Eagle	Little Gypsum Valley	Oliver & Duncan	Norwood	Uranium
Andrus	Ouray	Eastridge Mining Co.	Box 559, Ouray	Lead, Zinc
Ann No. 1 Incline	Slick Rock Hill	William J. Burwell	Egnar	Uranium
Bald Eagle	Gypsum Valley	Verne Sturdevent & Leonard Paul	Ouray	Uranium
Bean Patch	O'Neill Group	C. L. Lewis	629 North Ave., Grand Junction	Uranium
Black Jack	Slick Rock	Nelson Mining Co.	Box 346, Dove Creek	Uranium
Brighton	O'Neill Group	Joe Barnes	Uravan	Uranium
Canfield Mines	Slick Rock Hill	A. H. Canfield	Box 118, Dove Creek	Uranium
Carbonero	Ophir	Silver Bell Mines Co.	Ophir	Lead, Zinc
Charles P. 2 & 4	Slick Rock	Roy Kamholz	Egnar	Uranium
Cliff Dweller	Little Gypsum Valley	Jessie Bennett	Nucla	Uranium
Cliff Dweller No. 2	Big Gypsum Valley	Mike McGrath	657 Palmer St., Delta	Uranium
Cougar Group	Slick Rock	Henry Holling	Egnar	Uranium
Dan	Dolores River	Alfred & Oscar Blixt	Egnar	Uranium
Early Morn	Upper Gypsum Valley	Frank Myddleton	Nucla	Uranium
Ellison	Slick Rock	Blue Creek Mining Co.	618 Rood Ave., Grand Junction	Uranium
Elouisa Incline	Slick Rock Hill	W. R. McCormick	Dove Creek	Uranium
Falcon No. 2	Slick Rock	Uranium Metal Inc.	c/o Robert S. Palmer, 204 State Office Bldg., Denver 2	Uranium

OPERATING MINES IN SAN MIGUEL COUNTY—Continued

Name of Mine	Location	Operator	P. O. Address	Product
Forst Construction Co.	Little Gypsum Valley	F. W. Forst Construction Co.	Box 77, Norwood	Uranium
Frankie	Slick Rock	Burwell Mining Co.	Egnar	Uranium
Full Moon	Slick Rock	George Hazen	Box 18, Egnar	Uranium
Georgeto	Slick Rock Hill	Uranium, Inc.	Box 58, Moab, Utah	Uranium
Golden Eagle	Little Gypsum Valley	Union Uranium Co.	230 E. 19th St., Denver 3	Uranium
Golden Rod No. 4	Egnar	Johnson & Hargrove	Dove Creek	Uranium
Grants Claim	Slick Rock	Richard L. Duncan	Box 92, Dove Creek	Uranium
Hawk	Slick Rock Hill	W. J. Burwell	Egnar	Uranium
Hawkeye	Dolores River	Duncan & Sanchez	Dove Creek	Uranium
Helen Incline	Slick Rock	San Juan Leasing Co.	Uravan	Uranium
Horse Shoe No. 2	Dove Creek	Dwane & Ferrol Gordon	Egnar	Uranium
Horse Shoe No. 5	Dove Creek	Vranish & Bectol	Egnar	Uranium
Hot Shot	Bull Canyon	Homer Rosenquist	Box 223, Naturita	Uranium
Ike (O'Neill Group)	Slick Rock Hill	Dulaney Mining Co.	312 First Nat. Bank Bldg., Grand Junction	Uranium
Iron Springs Placer	Old Ophir	C. K. Williams & Co.	2001 Lynch St., E. St. Louis, Ill.	Bog iron
Jack Knife Nos. 1, 3	Bull Canyon	Four Corners Uranium Co.	U.S. Nat. Bank Bldg., Denver 2	Uranium
Japan Flora	Telluride	Frank George	Ouray	Lead, Zinc
Joe Dandy	Saw Pit	Colorado-Utah Uranium Co.	Box 72, Telluride	Uranium
Joker	Little Gypsum Valley	E. S. Kraus & Miller	Naturita	Uranium
Jupiter	Egnar	John Ledlow	Naturita	Uranium
Keystone	Slick Rock	Great Basins Petroleum	207 Denham Bldg., Denver 2	Uranium
King Incline No. 2	Slick Rock Hill	Skidmore Mining Co.	Dove Creek	Uranium
Legin Lease	Slick Rock	Ortmayer Mining Co.	1037 Ouray Ave., Grand Junction	Uranium
Little Helen	Spud Patch	Carnotite Corp.	Box 1478, Cortez	Uranium
Little Jimmy	Telluride	James Dalpaz	Telluride	Gold, Silver
Long Ridge	Gypsum Valley	J. L. McCullah	Redvale	Uranium
Lookout	Ham Canyon	Four Corners Uranium Co.	U.S. Nat. Bank Bldg., Denver 2	Uranium
Lucky Day	Spud Patch	Skidmore & Dalpaz	Box 94, Norwood	Uranium
Main Street	Bull Canyon	M. R. Conley & Melvin Rogers	Box 84, Norwood	Uranium
Mary Jane	Bull Canyon	J. L. McCullah	Redvale	Uranium
Mesa Group	Little Gypsum Valley	Charles Davis	Nucla	Uranium
Michael Bray	Slick Rock Hill	Samuel Pentico	c/o W. J. Burwell, 104 Teller Ave., Grand Junction	Uranium
Middle Group	Dolores River	M. R. Watters Mining Co.	Route 1, Dolores	Uranium
Muche Grande	Dove Creek	Lavar Birch & Assoc.	c/o Bud Butts, Dove Creek	Uranium
Neomie D.	Egnar	John F. Fahrion	Dove Creek	Uranium
Norma Jean No. 1	Egnar	George Hazen	Egnar	Uranium

Old Lost Claim	Big Gypsum Valley	Slickrock Mining & Development Corp.	Salt Lake City, Utah	Exploration
O'Neil Radium Group	Slick Rock Hill	Dulaney Mining Co.	312 First Nat. Bank Bldg., Grand Junction	Uranium
Ophir Iron Springs	Old Ophir	Boyd Robinson	Placerville	Iron oxide
Otera Incline (Lost Dog Claims)	Slick Rock Hill	W. R. McCormick	Dove Creek	Uranium
Parrot	Slick Rock	Consolidated Uranium Mines, Inc.	307 Darling Bldg., Salt Lake City, Utah	Uranium
Pinto	Slick Rock	William J. Burwell	104 Teller Ave., Grand Junction	Uranium
Pitch Fork No. 1	Gypsum Valley	Doyle Uranium Corp.	531 Main St., Grand Junction	Uranium
Pond	Gypsum Valley	J. L. McCullah	Redvale	Uranium
Red Bird	Carpenter Ridge	Lloyd Holmes & Harold Johnson	Nucla	Uranium
Roy Lee	Horse Shoe Area	Parrot Mining Co.	Box 475, Montrose	Uranium
Royal Group-Nelson Tunnel	Telluride	J. W. Nelson & Assoc.	Telluride	Gold
San Juan	Slick Rock	San Juan Leasing Co.	930 S. 2nd St., Montrose	Uranium
Silver Bell & Badger	Ophir Loop	Silver Bell Mines	Ophir	Lead, Zinc
Strawberry Roan	Egnar	E. D. & R. R. Davis	Cahone	Uranium
Sunny Side	Dolores River	Barkley, Britton & Northcott	Cortez	Exploration
Tail Hold	Slick Rock	Skidmore Mining Co.	Dove Creek	Uranium
Telluride Mines, Inc.	Telluride	Telluride Mines, Inc.	Telluride	Lead, Zinc
Terrible & Brook No. 1	Little Gypsum Valley	R. E. Mayfield	Box 315, Montrose	Uranium
Tom Boy	O'Neill Group	Dulaney Mining Co.	Grand Junction	Uranium
Unkle Sam	Dove Creek	R. R. Hollen & Assoc.	Egnar	Uranium
Veta Mad & Veta Glad	Slick Rock Hill	Gayno Mining Co.	730 N. 3rd Ave., Montrose	Uranium
Wally Claims Nos. 1-14 & B&B Claims Nos. 1-20	Horse Shoe Area	Bertoch Mines	3929 W. 3500 South, Salt Lake City 15, Utah	Uranium
White Crow	Little Gypsum Valley	Francis Foster	Placerville	Uranium

OPERATING MINES IN SUMMIT COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Alice Blue Gown	Breckenridge	William Nelson Bersonnet, Jr.	Box 164, Breckenridge	Exploration
Big Four	Heeney	Kyle & Thomas Mining Co.	Heeney	Silver
Boss	Dillon	Boss Mining Co.	Dillon	Lead, Zinc
Chataqua Extension	Montezuma	Leland Sharp & Bros.	Montezuma	Lead, Zinc
Little Hope	South Swan	A. R. Wright & Son	Jefferson	Lead, Zinc
Paymaster	Montezuma	Vinson & Co.	Breckenridge	Silver, Lead
Pittsburg	Breckenridge	James P. Webb Construction Co.	Breckenridge	Lead, Zinc
Pride of the Mountain	Georgia Pass	Horn Bros.	Montezuma	Silver, Molybdenum
Quail	Collier Mtn.	J. N. Jeffery	Montezuma	Silver, Lead
Recruit	Montezuma	Elmer Josephson	Evergreen	Development
Sammy B. Tunnel (Green Mtn. Girl) Admiral Group	Frisco	Moskal Leasing Co.	245 Sherman St., Denver 3	Development

OPERATING MINES IN SUMMIT COUNTY—Continued

Name of Mine	Location	Operator	P. O. Address	Product
Silver King	Montezuma	John M. Jeffery	Montezuma	Lead, Zinc
Silver Wing	Montezuma	Burke-Martin Mines	c/o T. Martin, 901 Sherman St., Denver 3	Development
Wellington	Breckenridge	W. L. Davenport	Box 192, Breckenridge	Lead, Zinc

OPERATING MINES IN TELLER COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Ajax	Battle Mountain	Golden Cycle Corp.	Box 127, Cripple Creek	Gold
Anaconda Tunnel	Anaconda Gulch	S. K. Y. Lease Co.	Cripple Creek	Exploration
Carbonate Queen	Battle Mountain	Acme Mining Co.	Victor	Gold
Chicago Tunnel	Globe Hill	Globe Hill Mining Co.	333 Independence Bldg., Colorado Springs	Gold
Commanche	Rosemont	Fred C. Haitz	3428 W. Colorado Ave., Colorado Springs	Exploration
Cresson	Raven Hill	Cresson Consolidated Gold M&M Co.	Box 127, Cripple Creek	Gold
Deadwood	Bull Hill	Deadwood Leasing Co.	Box 156, Cripple Creek	Gold
Doctor Jack Pot Mining Co.	Cripple Creek	Doctor Jack Pot Mining Co.	Cripple Creek	Gold
E. Porter Gold King	Gold Hill	Doepke Mining Co.	2431 N. Nevada, Colorado Springs	Gold
Elkton Co	Cripple Creek	Elkton Co.	Cripple Creek	Gold
Ft. Knox, Jr.	Bull Hill	Ft. Knox Leasing Co.	Box 127, Cripple Creek	Gold
Gold King	Cripple Creek	Cripple Creek Mining & Milling Co.	Box 247, Cripple Creek	Gold, Tourist
Gold Soverign	Bull Hill	Gold Soverign Mining Co.	Cripple Creek	Development
Grace Greenwood	Beacon Hill	Le Clair Gold Mining Co.	Box 127, Cripple Creek	Gold
Henry Adney Dump & Mine	Beacon Hill	John Robush & Co.	Box 205, Cripple Creek	Gold
Hiawatha	Beacon Hill	John & Earl W. Robush	Box 205, Cripple Creek	Gold
Joe Dandy	Raven Hill	Schreck & Martin	Victor	Gold
King Soloman	Cripple Creek	Merritt K. Ruddock	Box 1, Florrisant	Gold
Little May	Beacon Hill	John Robush & Co.	Box 205, Cripple Creek	Gold
Molly Kathleen	Tenderfoot Hill	Markley Mining & Exploration Co.	Cripple Creek	Gold, Tourist
New Gold Dollar Mining Co.	Cripple Creek	New Gold Dollar Mining Co.	Cripple Creek	Gold
Old Gold	Beacon Hill	John & Earl W. Robush	Box 205, Cripple Creek	Gold
Pharmacist	Bull Hill	Primm & Baake	Victor	Exploration
Portland No. 1 Shaft	Battle Mountain	United Gold Mines	Box 127, Cripple Creek	Gold
Strong	Victor	Front Range Mines, Inc.	405 Burns Vault Bldg., Denver 2	Gold
Vindicator Group	Battle Mountain	United Gold Mines	Box 127, Cripple Creek	Gold

OPERATING QUARRIES IN BOULDER COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Brodie's St. Vrain	Lyons	K. C. Brodie	Box 325, Lyons	Sandstone
Johnson Quarry	Lyons	L. N. & F. A. Johnson	1524 S. Federal Blvd., Denver 19	Quartzite Flagstone
Loukonen Brothers	Lyons	Reins & Leonard Loukonen	Route 3, Longmont	Flagstone
Ohline	Lyons	Jacobson & Evans Stone Co.	Box C, Lyons	Sandstone
Red Stone	Lyons	Colorado Stone Co.	1645 Main St., Longmont	Sandstone
Summers	Lyons	Dewey Summers	Box 124, Lyons	Sandstone
University of Colorado	Lyons	University of Colorado	c/o R. W. Lind, Boulder	Building stone
White Stone	Lyons	Jess A. Vickery	Box 163, Lyons	Sandstone

OPERATING QUARRIES IN CHAFFEE COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Blue Brute	Ute Trail	Silver Rocker Mining & Development Co.	Box 108, Salida	Feldspar, Beryl, Mica
Calcium	Ute Trail	The Calcium Co.	Box 910, Salida	Calcium
Colorado Granite (Formerly Crystal Placer)	Ute Trail	Colorado Granite Co.	Salida	Granite
Long's Gulch Placer	Ute Trail	Paul B. Lorenz & Robert Deike	Cheyenne, Wyoming	Feldspar, Beryl, Mica, Tantalite
Monarch Lime Quarry	Salida	The Colorado Fuel & Iron Corp.	Garfield	Limestone
Mt. Princeton Quarry	Mt. Princeton Hot Springs	The Calcium Co.	Box 910, Salida	Granite
Rock King Quarry	Ute Trail	Harvey Moyer	Salida	Feldspar, Beryl, Mica
Soda Spar (Homestake Mine)	Salida	M & S Inc.	Box 671, Salida	Feldspar
Warner's Quarry	Cameron Mtn. Dist.	J. N. Warner	Rainbow Bldg., Salida	Granite

OPERATING QUARRIES IN COSTILLA COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Mesita Hill	Mesita	Colorado Aggregate Co.	Mesita	Volcanic cinder

OPERATING QUARRIES IN CUSTER COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Green	Rosita	Barnhisal Construction Co.	Box 7, Westcliffe	Perlite

OPERATING QUARRIES IN DOUGLAS COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Helmer Limestone, Fire Clay, Silica & Sand	Littleton	Helmer Brothers	c o T. L. Helmer, Route 1, Littleton	Limestone, Fireclay, Sand
Johnson Quarry	Castle Rock	L. N. & F. A. Johnson	1524 S. Federal Blvd., Denver 19	Lava stone

OPERATING QUARRIES IN EL PASO COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Lennox Breed	Pikeview	Golden Cycle Corp., Pike's Peak Fuel Division	510 Carlton Bldg., Colorado Springs	Concrete aggregate

OPERATING QUARRIES IN FREMONT COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
American Crystal U.G. Quarry	Taylor Gulch	Frank H. Norberg Co.	703 U.S. Nat. Bank Bldg., Denver 2	Limestone
Aspen Ridge Quarry	Whitehorn Dist	V. D. Coleman Co.	225 W. Cimarron St., Colorado Springs	Monumental granite
Burnito	Canon City	Ray Sturbaum & Son	Canon City	Silica Rock
Calcite	Howard	Colorado Limestone Co.	Box 8, Howard	Limestone
Canon Dolomite Quarry	Canon City	The Colorado Fuel & Iron Corp.	Box 316, Pueblo	Dolomite
Coaldale Gypsum	Coaldale	Nat Senatore	Penrose	Gypsum
Colorado Springs	Salt Canyon	Nat Senatore	Penrose	Gypsum
Colorosa Travertine	Canon City	Colonna & Co. of Colorado	Box 387, Canon City	Travertine
Cowan Travertine	Canon City	Cowan Brothers	Canon City	Travertine
Delano Quarry	Texas Creek	Coleman Brothers	807 Allison Ave., Canon City	Monumental granite
Devil's Hole	Texas Creek	Kenneth R. Cox	Box 431, Canon City	Feldspar, Mica, Beryl
English (Wellsville)	English Siding	Colonna & Co. of Colorado	Box 387, Canon City	Limestone
Horney Ganister	Temple Canyon	Ralph Pierce	214 W. New York St., Canon City	Silica
Mica Lode Quarry	Canon City	Alex Lockheart & Son	Box 521, Canon City	Feldspar, Mica
Oak Creek	Sand Gulch	V. D. Coleman Co.	225 W. Cimarron St., Colorado Springs	Granite
Penrose	Salt Canon	Dale Hoover	Parkdale	Silica rock
Portland	Portland	Ideal Cement Co.	Portland	Sandstone, Shale Limestone
Royal Gorge Fleur Quarry	Canon City	Cowan Brothers	Canon City	Marble
Spikebuck	Canon City	Hardesty & Langeford	Canon City	Feldspar
Texas Creek View	Texas Creek Station	Isabell & Son	623 Whipple St., Canon City	Feldspar, Beryl, Mica
Trail Gulch	Garden Park	Colonna & Co. of Colorado	Box 387, Canon City	Limestone

OPERATING QUARRIES IN GARFIELD COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Glenwood Springs Lime Quarry	Glenwood Springs	Frank H. Norberg Co.	703 U.S. Nat. Bank Bldg., Denver 2	Limestone

OPERATING QUARRIES IN GUNNISON COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Beryllium Mining Co., Inc.	Ohio City	Beryllium Mining Co., Inc.	Ohio City	Beryl, Mica, Columbite

OPERATING QUARRIES IN JEFFERSON COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Biggar's Mica Mine	Tiny Town	Ben Waltz	Route 2, Box 47, Morrison	Feldspar, Beryl, Mica
Ken-Caryl Lease	Tiny Town	Wilson, Prosser & Provo	Box 232, Route 1, Morrison	Feldspar, Beryl, Mica
Q Quarry	Golden	Clements & Jessen	1392 W. 11th Ave., Denver 4	Feldspar

OPERATING QUARRIES IN LAKE COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Pine View Placer	Leadville	Dale Hoover	Parkdale	Silica rock

OPERATING QUARRIES IN LARIMER COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Arkins	Masonville	Colorado Stone Co.	Box 596, Longmont	Sandstone
Berthoud	Berthoud	Colorado Stone Co.	Box 596, Longmont	Sandstone
Goodwin	Fort Collins	Ernest W. Munroe	Route 2, Box 273, Fort Collins	Gypsum
Masonville Gray	Masonville	C. W. Weaver	759 S. York St., Denver 9	Sandstone
Rex Quarry (Clark)	Owl Canyon	Frank H. Norberg Co.	703 U.S. Nat. Bank Bldg., Denver 2	Limestone
U. S. Gypsum Co.	Loveland	U. S. Gypsum Co.	Masonville Route, Loveland	Gypsum

OPERATING QUARRIES IN LAS ANIMAS COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Red Rock	Higbee	Colorado Alabaster Co.	901 W. 4th St., La Junta	Alabaster

OPERATING QUARRIES IN PARK COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Meyers	Guffey Road	Archie Ellis	Canon City	Feldspar, Beryl, Mica

OPERATING QUARRIES IN TELLER COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Pikes Peak	Cripple Creek	Pikes Peak Granite Co.	126½ E. Pikes Peak Ave., Colorado Springs	Granite

OPERATING PEAT BOGS IN BOULDER COUNTY

Name of Bog	Location	Operator	P. O. Address	Product
Comstock Peat Bog	Caribou	McCoy & Jensen	Morrison	Peat
Left Hand Peat Co.	Ward	Left Hand Peat Co.	Box 336, Boulder	Peat

OPERATING PEAT BOGS IN GILPIN COUNTY

Name of Bog	Location	Operator	P. O. Address	Product
Rudolph Peat Bog	The Gap	Gus Rudolph	Central City	Peat

OPERATING PEAT BOGS IN PARK COUNTY

Name of Bog	Location	Operator	P. O. Address	Product
Briscoe Peat Bog	Fairplay	Supreme Coal Co.	864 S. Broadway, Denver 3	Peat

OPERATING PEAT BOGS IN TELLER COUNTY

Name of Bog	Location	Operator	P. O. Address	Product
Bison Peat Bog	Pikes Peak Area	M. B. Martin	2605 W. Colorado Ave., Colorado Springs	Peat
Divide Peat Bog	Divide	M. B. Martin	2605 W. Colorado Ave., Colorado Springs	Peat
Moore Peat Bog	Divide	A. E. Pigg	2108 W. Cucharras St., Colorado Springs	Peat

OPERATING CLAY MINES AND PITS IN BOULDER COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Rocky Flats & Plainview Pits	Marshall	Colorado Brick Co.	Box 727, Longmont	Clay

OPERATING CLAY MINES AND PITS IN DOUGLAS COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Helmer Clay	Littleton	T. L. Helmer	Route 1, Box 94, Littleton	Fire clay
Hillside	Waterton	W. H. Hedley	3726 Newton St., Denver 11	Clay
Hogback	Waterton	Robinson Brick & Tile Co.	500 Santa Fe Dr., Denver 23	Clay
Stevens Ranch	Castle Rock	Stroud Wisenhunt	Castle Rock	Clay

OPERATING CLAY MINES AND PITS IN EL PASO COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Apache No. 5	Calhan	Robinson Brick & Tile Co.	500 Santa Fe Dr., Denver 23	Clay
Hecla	Husted	Glen A. Scribner	Route 3, Colorado Springs	Clay

OPERATING CLAY MINES AND PITS IN FREMONT COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Flint No. 2	Canon City	C. E. Goodale	712 N. 9th St., Canon City	Fire clay

OPERATING CLAY MINES AND PITS IN JEFFERSON COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Chieftain	Denver	Robinson Brick & Tile Co.	500 Santa Fe Dr., Denver 23	Clay
Cowan Clay Pit	Morrison	Montgomery Brothers, Inc.	1208 S. Mariposa St., Denver 23	Clay
Denver Terra Cotta	Golden	Denver Terra Cotta Co.	135 Tejon St., Denver 23	Development
Golden Clay Mining Co.	Golden	Golden Clay Mining Co.	Box 349, Golden	Plastic clay, Fire clay
Johnson Clay Mine No. 1	Golden	Denver Sewer Pipe & Clay Co.	4501 Fox St., Denver 16	Fire clay
Lakewood Brick Co.	Golden	Lakewood Brick Co.	1325 Jay St., Denver 15	Clay
Lindsay Clay Mine	Golden	George W. Lindsay	1931 Forest St., Denver 20	Plastic fire clay
North Golden Clay	Golden	The Denver Fire Clay Co.	2301 Blake St., Denver 5	Clay
George W. Parfet Estate, Inc.	Golden	George W. Parfet Estate, Inc.	Linder Block, Golden	Clay
H. M. Rubey Clay Co.	Golden	George W. Parfet Estate, Inc.	Linder Block, Golden	Clay
South Golden Clay Mine	Golden	The Denver Fire Clay Co.	2301 Blake St., Denver 5	Clay
Strainland	Golden	Denver Sewer Pipe & Clay Co.	4501 Fox St., Denver 16	Fire clay

OPERATING CLAY MINES AND PITS IN LAS ANIMAS COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
New Mary Clay Mine	Trinidad	Trinidad Brick & Tile Co.	Trinidad	Clay

OPERATING CLAY MINES AND PITS IN PUEBLO COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Chamblin Clay Mine	Capers Spur	Standard Fire Brick Co.	24th & Albany Sts., Pueblo	Fire clay
Nellie Helen	Stone City	Arthur L. Wands	Stone City	Clay
Rock Creek Clay Mine	Rock Creek	Standard Fire Brick Co.	24th & Albany Sts., Pueblo	Fire clay
Stone City No. 1 Clay Mine	Stone City	Pueblo Clay Products Co.	Box 1657, Pueblo	Clay
Stone City No. 2 Clay Mine	Stone City	Pueblo Clay Products Co.	Box 1657, Pueblo	Clay
Stone City No. 3 (Spring Canyon)	Stone City	Pueblo Clay Products Co.	Box 1657, Pueblo	Clay
Stone City No. 4 (Meadow Mine)	Stone City	Pueblo Clay Products Co.	Box 1657, Pueblo	Clay

OPERATING MILLS, PLANTS AND SMELTERS IN BOULDER COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Benson Washer	Nederland	Ross Benson	Nederland	Tungsten
Burlington Mill	Valmont	General Chemical Div., Allied Chemical & Dye Corp.	Box 228, Boulder	Fluorspar
Cross Washer	Nederland	Tom Linder	Nederland	Tungsten
Jump Mill	Sugarloaf	Jump Mining Co.	1916-4th St., Boulder	Tungsten
Lakewood	Nederland	Cobb & Weldon	401 Pine St., Boulder	Fluorspar
Lamertine Mill	Idaho Springs	Lamertine-Harrison M&M Co.	c/o George F. Calloway, Idaho Springs	Development
Marion Mill	Sugarloaf	Wah Chang Corporation	New York, New York	Tungsten
Pastore Washer	Nederland	Pastore & Co.	1946 Walnut St., Boulder	Tungsten
Wano	Jamestown	Ozark-Mahoning Co.	Jamestown	Fluorspar
Wolf Tongue	Nederland	Cold Springs Tungsten, Inc.	403 Interstate Trust Bldg., Denver 2	Tungsten

OPERATING MILLS, PLANTS AND SMELTERS IN CHAFFEE COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Granite Finishing Plant	Salida	Colorado Granite Co.	Salida	Granite
Mining Venture Mill	Browns Canyon	Mining Venture Corp.	303 Durant Bldg., Pueblo	Tungsten
Poncha Fluorspar Mill	Poncha Springs	Reynolds Mining Co.	Box 169, Salida	Fluorspar
Western Feldspar Mill	Salida	Western Feldspar Milling Co.	Box 671, Salida	Feldspar

OPERATING MILLS, PLANTS AND SMELTERS IN CLEAR CREEK COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Black Eagle Mill	Chicago Creek	United Mining & Leasing Co.	Box 246, Central City	Gold, Silver, Lead, Zinc
Dixie	Idaho Springs	LeRoy Giles & Co.	Idaho Springs	Gold
Front Range Mill	Dumont	Front Range Mining Co., Inc.	Burns Vault Bldg., Denver 2	Lead, Zinc
Silver Spruce Mill	Idaho Springs	Silver Spruce Gold Mining Co.	Idaho Springs	Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS IN CUSTER COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Querida Plant	Bassick Mine Dump	Metals Recovery & Process Corp.	Box 386, Florence	Gold

OPERATING MILLS, PLANTS AND SMELTERS IN DENVER COUNTY

Name of Mill or Plant	Location	Operator	P O. Address	Product
Consolidated Feldspar	Denver	International Minerals & Chemical Co.	1333 W. Maple St., Denver 23	Feldspar

Denver Chemical Works	Denver	General Chemical Div., Allied Chemical & Dye Corp.	1271 W. Bayaud Ave., Denver 23	Pyrite concentrates
Globeville Plant	Globeville	American Smelting & Refining Co.	607 First Nat. Bank Bldg., Denver 2	Cadmium

OPERATING MILLS, PLANTS AND SMELTERS IN DOLORES COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Mineral M&M Inc. (Old Edwards Mill)	Rico	Mineral M&M Inc.	Rico	Silver, Lead
Rico Argentine Mill	Rico	Rico Argentine Mining Co.	Rico	Gold, Silver, Lead, Zinc, Copper, Pyrite

OPERATING MILLS, PLANTS AND SMELTERS IN EAGLE COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Eagle Mill	Gilman	The New Jersey Zinc Co.	Gilman	Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS IN FREMONT COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Canon Crushing Plant	Canon City	Colonna & Co. of Colorado	Box 387, Canon City	Limestone
Empire Zinc	Canon City	Empire Zinc Div., New Jersey Zinc Co.	Gilman	Lead, Zinc
Portland Cement Plant	Portland	Ideal Cement Co.	Box 231, Florence	Cement
Portland Plaster Mill	Portland	Ideal Cement Co.	Box 231, Florence	Plaster

OPERATING MILLS, PLANTS AND SMELTERS IN GARFIELD COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Oil Shale Plant	Rifle	U. S. Bureau of Mines	New Custom House, Denver 2	Oil Shale
United States Vanadium Mill	Rifle	United States Vanadium Corp.	Rifle	Uranium

OPERATING MILLS, PLANTS AND SMELTERS IN GILPIN COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Maggie Mill	Black Hawk	Walter Perkins	Black Hawk	Exploration

OPERATING MILLS, PLANTS AND SMELTERS IN GUNNISON COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Carter Mill	Ohio City	Kanarado Mining Co.	Ohio City	Gold, Lead, Zinc
Mesa Verde Uranium Mill	Cumberland Pass	Mesa Verde Uranium Co.	808 Boston Bldg., Denver 2	Tungsten

OPERATING MILLS, PLANTS AND SMELTERS IN JACKSON COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Northgate	Northgate	Ozark-Mahoning Co.	Cowdery	Fluorspar

OPERATING MILLS, PLANTS AND SMELTERS IN JEFFERSON COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Beryl Ores Co.	Arvada	M. Lyons, Mgr., Beryl Ores Co.	Arvada	Beryl

OPERATING MILLS, PLANTS AND SMELTERS IN LAKE COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Arkansas Valley Smelter	Leadville	American Smelting & Refining Co.	Denver 2	Gold, Silver, Lead
Climax Mills	Climax	Climax Molybdenum Corp.	Climax	Molybdenum, Tin, Tungsten, Pyrite
Jimmy Roberts Mill	Hamm Mill Site	Jimmy Roberts	Leadville	Gold
Resurrection Mill	California Gulch	Resurrection Mining Co.	Box 936, Leadville	Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS IN LA PLATA COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Vanadium Corp. of America Durango Plant	Durango	Vanadium Corp. of America	Durango	Uranium
Zodomok Mill	Hesperus	Zodomok Mines, Inc.	3270 Main Ave., Durango	Gold, Silver

OPERATING MILLS, PLANTS AND SMELTERS IN LARIMER COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Boettcher Plant	La Porte	Ideal Cement Co.	Box 579, Fort Collins	Cement

OPERATING MILLS, PLANTS AND SMELTERS IN MESA COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
A. E. C. Plant	Grand Junction	Atomic Energy Commission	Grand Junction	Uranium
Climax Uranium Mill	Grand Junction	Climax Uranium Co.	Grand Junction	Uranium

OPERATING MILLS, PLANTS AND SMELTERS IN MINERAL COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Emperius Mill	Creede	Emperius Mining Co.	Creede	Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS IN MONTROSE COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
United States Vanadium Uravan Plant	Uravan	United States Vanadium Co.	Uravan	Uranium
Vanadium Corp. of America Naturita Plant	Naturita	Vanadium Corp. of America	Durango	Uranium

OPERATING MILLS, PLANTS AND SMELTERS IN OURAY COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Idarado Mill	Ouray	Idarado Mining Co.	Ouray	Zinc, Copper, Lead
King Lease Mill	Ouray	King Lease, Inc.	Ouray	Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS IN PARK COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Reduction Plant (Record Mill)	Mosquito Gulch	Colorado Reduction Corp.	Alma	Gold, Silver, Lead, Copper

OPERATING MILLS, PLANTS AND SMELTERS IN PUEBLO COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Mica Grinding Plant	Pueblo	International Minerals & Chemicals Corp.	330 West D St., Pueblo	Mica

OPERATING MILLS, PLANTS AND SMELTERS IN SAGUACHE COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Bonanza Mill	Bonanza	Bonanza Consolidated Mining Co., Inc.	Box 854, Salida	Gold, Silver, Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS IN SAN JUAN COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Pride Mill	Silverton	Cameron J. Grant	Silverton	Gold, Silver, Lead, Zinc, Copper
Shenandoah Dives Mining Co.	Silverton	Shenandoah Dives Mining Co.	Silverton	Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS IN SAN MIGUEL COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Silver Bell Mill	Ophir	Silver Bell Mines Co.	Ophir	Lead, Zinc, Tungsten
Telluride Mines Mill	Telluride	Telluride Mines, Inc.	Telluride	Lead, Zinc, Copper

OPERATING MILLS, PLANTS AND SMELTERS IN SUMMIT COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Chatauqua	Montezuma	Sally Barber Mining Co.	c/o Mike Vinson, Breckenridge	Lead
Plymouth Mill	Montezuma	John M. Jeffery	Montezuma	Silver, Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS IN TELLER COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Carlton Mill	Victor	Golden Cycle Corp.	Box 47, Victor	Gold, Silver

OPERATING PLACERS IN ADAMS COUNTY

Name of Placer	Location	Operator	P. O. Address	Product
Cooley Gravel Co.	Denver	Cooley Gravel Co.	6101 Lowell Blvd., Denver 11	Gold, Sand, Gravel
Kerkling & Slensker	Denver	Kerkling & Slensker	1800 Dover St., Lakewood	Gold, Sand, Gravel
Plant No. 8	Denver	Brannan Sand & Gravel Co.	4800 Brighton Blvd., Denver 16	Gold, Sand, Gravel
Plant No. 10	Denver	Brannan Sand & Gravel Co.	4800 Brighton Blvd., Denver 16	Gold, Sand, Gravel
Plant No. R	Denver	Brannan Sand & Gravel Co.	4800 Brighton Blvd., Denver 16	Gold, Sand, Gravel

OPERATING PLACERS IN CHAFFEE COUNTY

Name of Placer	Location	Operator	P. O. Address	Product
Coleman Placer	Lost Canyon	Lost Canyon Placer Co.	Colorado Springs	Exploration
Good Hope Placer	Lost Canyon	La Plata Mining & Development Corp.	1434 N. Walnut St., Colorado Springs	Gold, Gravel

OPERATING PLACERS IN CLEAR CREEK COUNTY

Name of Placer	Location	Operator	P. O. Address	Product
Lombard Placer Mine	Lincoln Dist.	Lombard Mines Inc.	c/o Oscar L. Stutenroth, Idaho Springs	Exploration
Spanish Bar	Clear Creek	Spanish Bar Mine Co.	c/o L. J. Beggs, Mgr., Central City	Exploration

OPERATING PLACERS IN JEFFERSON COUNTY

Name of Placer	Location	Operator	P. O. Address	Product
Plant No. 11	Wheatridge	Brannan Sand & Gravel Co.	4800 Brighton Blvd., Denver 16	Gold, Sand, Gravel
Rio Grande	Denver	Rio Grande Gravel Co.	123 Santa Fe Dr., Denver 23	Gold, Sand, Gravel

OPERATING PLACERS IN LAKE COUNTY

Name of Placer	Location	Operator	P. O. Address	Product
Gold Leaf Mining & Dredging Co.	Tennessee Creek	Gold Leaf Mining & Dredging Co.	c/o E. M. Edwards, Buena Vista	Development

OPERATING PLACERS IN SUMMIT COUNTY

Name of Placer	Location	Operator	P. O. Address	Product
Wapite	Breckenridge	B & O Mines	c/o Ross L. Benson, Breckenridge	Gold, Sand, Gravel

ROAD WORK, TUNNELS AND DAMS—1954

ADAMS COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Barr Lake	Barr Lake	Peter Kiewit Sons Co.	Box 8787, Univ. Station, Denver	Highway

ARAPAHOE COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Denver	Denver	Peter Kiewit Sons Co.	Box 8787, Univ. Station, Denver	Highway

BOULDER COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Boulder Supply Canal	Boulder-Lyons	Bales & Kite	511 Title Bldg., Kansas City, Mo.	Canal
Highway	Boulder & Jefferson Counties	Brown Construction Co.	1530 E. Abriendo Ave., Pueblo	Highway

EL PASO COUNTY

Name of Operation	Location	Operator	P. O Address	Project
Peyton	Peyton	Peter Kiewit Sons Co.	Box 8787, Univ. Station, Denver	Highway
So. Suburban Dam	Seven Falls Area	Douglas Jardine	Box 126, Colorado Springs	Reservoir

FREMONT COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway	Canon City-Guffey	Fremont County Commissioners	Canon City	Highway
Highway	Sedalia-Woodland Park	Platt Rogers, Inc.	Box 153, Pueblo	Highway

GARFIELD COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Rifle & Puleson	Rifle	E. J. Rippy & Sons	New Castle	Highway
Rifle Project	Rifle-Grand Valley	Schmidt Construction Co.	Box 66, Grand Junction	Highway

KIT CARSON COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Flagler	Flagler	Peter Kiewit Sons Co.	Box 8787, Univ. Station, Denver	Highway

LA PLATA COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway	Bayfield	Brown Construction Co.	Pueblo	Highway

LINCOLN COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Hugo	Hugo	Peter Kiewit Sons Co.	Box 8787, Univ. Station, Denver	Highway

MOFFAT COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Craig	Craig	Peter Kiewit Sons Co.	Box 8787, Univ. Station, Denver	Highway

MONTEZUMA COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Cortez	Cortez	Peter Kiewit Sons Co.	Box 8787, Univ. Station, Denver	Highway

MONTROSE COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway	Naturita-Uravan	Colorado Constructors, Inc.	725 W. 39th Ave., Denver 5	Highway

OURAY COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway	San Juan Dist.	Lowdermilk Brothers	1950 W. Dartmouth Ave., Englewood	Highway

PARK COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Blue River Tunnel	Grant	City & County of Denver Board of Water Commissioners	City & County Bldg., Denver 2	Water Diversion Tunnel
Montgomery Dam	Montgomery Gulch	Fisher Contracting Co.	Box G, Alma	Dam

SAN MIGUEL COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway	Placerville-Telluride	Colorado Constructors, Inc.	725 W. 39th Ave., Denver 5	Highway

SUMMIT COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Quandary Tunnel	Hoosier Pass	Stolte, Inc.	Box 207, Fairplay	Water Diversion Tunnel

CORE AND WAGON DRILLING OPERATIONS

Howard Binkley	1425 Grand St., Grand Junction	Colorado Plateau
Boyle Brothers Drilling Co.	1321 S. Main St., Salt Lake City, Utah	Colorado Plateau
Bush Drilling Co.	Grand Junction	Colorado Plateau
Cannon Drilling Co.	Grand Junction	Colorado Plateau
Johnson & Youvan	Naturita	Colorado Plateau
Minerals Engineering Co.	Grand Junction	Colorado Plateau
Shortes Drilling Co.	Grand Junction	Colorado Plateau
Sprague & Henwood	221 W. Olive St., Scranton, Pa.	Colorado Plateau

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